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THE

ANATOMY OF DRUNKENNESS.

SECOND EDITION.

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THE ANATOMY OF DRUNKENNESS.

BY

ROBERT MACNISH,

MEMBER OF THE FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

SECOND EDITION.

W. R. M'PHUN, GLASGOW.

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BY HIS SINCERE FRIEND,

ROBERT MACNISH.

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CHAPTER I.

PRELIMINARY OBSERVATIONS.

DRUNKENNESS is not, like some other vices, peculiar to modern times. It is handed down to us from "hoar antiquity;" and, if the records of the antediluvian era were more complete, we should probably find that it was not unknown to the Father of the human race. The cases of Noah and Lot, recorded in the sacred writings, are the earliest of which tradition or history has left any record; and both occurred in the infancy of society. Indeed, wherever the grape flourished, inebriation prevailed. The formation of wine from this fruit, was among the earliest discoveries of man, and the bad consequences thence resulting, seem to have been almost coeval with the discovery. Those regions

whose ungenial latitudes indisposed them to yield the vine, gave birth to other products which served as substitutes; and the inhabitants rivalled or surpassed those of the south in all kinds of Bacchanalian indulgence—the pleasures of drinking constituting one of the most fertile themes of their poetry, in the same manner as, in other climates, they gave inspiration to the souls of Anacreon and Hafiz.

Drunkenness has varied greatly at different times and among different nations. There can be no doubt that it prevails more in a rude than in a civilized state of society. This is so much the case, that as men get more refined, the vice will gradually be found to soften down, and assume a less revolting character. Nor can there be a doubt that it prevails to a much greater extent in northern than in southern latitudes. The nature of the climate renders this inevitable, and gives to the human frame its capabilities of withstanding liquor: hence, a quantity which scarcely ruffles the frozen current of a Norwegian's blood, would scatter madness and fever into the brain of the Hindoo. Even in Europe, the inhabitants of the south are far less adapted to sustain intoxicating agents than those of the north. Much of this depends upon the coldness of the climate, and much also upon the peculiar physical and moral frame to which that coldness gives rise. The

natives of the south are a lively, versatile people; sanguine in their temperaments, and susceptible, to an extraordinary degree, of every impression. Their minds seem to inherit the brilliancy of their climate, and are rich with sparkling thoughts and beautiful imagery. The northern nations are the reverse of all this. With more intensity of purpose, with greater depth of reasoning powers, and superior solidity of judgment, they are in a great measure destitute of that sportive and creative brilliancy which hangs like a rainbow over the spirits of the south, and clothes them in a perpetual sunshine of delight. The one is chiefly led by the heart, the other by the head. The one possesses the beauty of a flower-garden, the other the sternness of the rock, mixed with its severe and naked hardihood. Upon constitutions so differently organized, it cannot be expected that a given portion of stimulus will operate with equal power. The airy inflammable nature of the first is easily roused to excitation, and manifests feelings which the second does not experience till he has partaken much more largely of the stimulating cause. On this account, the one may be inebriated, and the other remain comparatively sober upon a similar quantity. In speaking of this subject, it is always to be remembered that a person is not to be considered a drunkard because he consumes a certain portion of

liquor; but because what he does consume produces certain effects upon his system. The Russian, therefore, may take six glasses a-day, and be as temperate as the Italian who takes four, or the Indian who takes two. But even when this is acceded to, the balance of sobriety will be found in favour of the south: the inhabitants there not only drink less, but are, *bona fide*, more seldom intoxicated than the others. Those who have contrasted London and Paris, may easily verify this fact; and those who have done the same to the cities of Moscow and Rome, can bear still stronger testimony. Who ever heard of an Englishman sipping *eau sucrée*, and treating his friends to a glass of lemonade? Yet such things are common in France; and, of all the practices of that country, they are those most thoroughly visited by the contemptuous malisons of John Bull.

It is a common belief that wine was the only inebriating liquor known to antiquity, but this is a mistake. Tacitus mentions the use of ale or beer as common among the Germans of his time. By the Egyptians, likewise, whose country was ill adapted to the cultivation of the grape, it was employed as a substitute for wine. Ale was common in the middle ages, and Mr. Park states that very good beer is made, by the usual process of brewing and malting, in the interior of

Africa. The favourite drink of our Saxon ancestors was ale or mead. Those worshippers of Odin were so notoriously addicted to drunkenness, that it was regarded as honourable rather than otherwise; and the man who could withstand the greatest quantity was looked upon with admiration and respect: whence the drunken songs of the Scandinavian scalds: whence the glories of Valhalla, the fancied happiness of whose inhabitants consisted in quaffing draughts from the skulls of their enemies slain in battle. Even ardent spirit, which is generally supposed to be a modern discovery, probably existed from a very early period. It is said to have been first made by the Arabians in the middle ages, and in all likelihood may lay claim to a still remoter origin. The spirituous liquor called arrack has been manufactured in the island of Java, as well as in the continent of Hindostan, from time immemorial. Brandy was made in Sicily at the commencement of the fourteenth century. As to wine, it was so common in ancient times as to have a tutelar god appropriated to it: Bacchus and his companion Silenus are as household words in the mouths of all, and constituted most important features of the heathen mythology. We have all heard of the Falernian and Campanian wines, and of the wines of Cyprus and Shiraz. Indeed, there is reason to believe that the ancients

were in no respect inferior to the moderns in the excellence of their vinous liquors, whatever they may have been in the variety. Wine was so common in the eastern nations, that Mahomet foreseeing the baleful effects of its propagation, forbade it to his followers, who, to compensate themselves, had recourse to opium. The Gothic or dark ages seem to have been those in which it was least common: in proof of this it may be mentioned, that so late as 1298, it was vended as a cordial by the English apothecaries. At the present day it is little drunk, except by the upper classes, in those countries which do not naturally furnish the grape. In those that do, it is so cheap as to come within the reach of even the lowest. *

In speaking of drunkenness, it is impossible not to be struck with the physical and moral degradation which it has spread over the world. Wherever intoxicating liquors become general, morality has been found on the decline. They seem to act like the simoom of the desert, and scatter destruction and misery around their path. The ruin of Rome was owing to luxury,

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* The quantity of wine raised in France alone is almost incredible. The vineyards in that country are said to occupy five millions of acres, or a twenty-sixth part of the whole territory.

of which indulgence in wine was the principal ingredient. Hannibal's army fell less by the arms of Scipio than by the wines of Capua; and the inebriated hero of Macedon, after slaying his friend Clytus, and burning the palace of Persepolis, expired at last of a fit of intoxication, in his thirty-third year.* Let us look back to Belshazzar's Feast, where, under the phrenzied excitation of wine, insult and dishonour were flung at

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* "Alexander was for ever solemnizing new festivals, and perpetually at new banquets, in which he quaffed with his usual intemperance. After having spent a whole night in carousing, a second was proposed to him. He met accordingly, and there were twenty guests at table. He drank to the health of every person in the company, and then pledged them severally. After this, calling for Hercules's cup, which held six bottles, it was filled, when he poured it all down, drinking to a Macedonian of the company, Proteas by name, and afterwards pledged him again in the same furious bumper. He had no sooner swallowed it than he fell upon the floor."—"In this condition he was seized with a violent fever, and carried half-dead to his palace. The fever continued, though with some good intervals, in which he gave the necessary orders for the sailing of the fleet, and the marching of his land-forces, being persuaded he should soon recover. But at last, finding himself past all hopes, and his voice beginning to fail, he drew his ring from his finger, and gave it to Perdiccas, with orders to convey his corpse to the temple of Ammon."—*Rollin.*

the throne of the Most High. Let us look at the dreadful handwriting which flashed astonishment and dismay on the hearts of these frantic Bacchanals, and, like the sound of the last trumpet, pronounced their doom. A volume might be written in illustration of the evil effects of dissipation; but this is unnecessary to those who look carefully around them, and more especially to those who are conversant with the history of mankind. At the same time, when we speak of drunkenness as occurring in antiquity, it is proper to remark, that there were certain countries in which it was viewed in a much more dishonourable light than by any modern nation. The Nervii refused to drink wine, alleging that it made them cowardly and effeminate: these simple people had no idea of what by our seamen is called *Dutch courage;* they did not feel the necessity of elevating their native valour by any artificial excitement. The ancient Spartans held ebriety in such abhorrence, that, with a view to inspire the rising generation with a due contempt of the vice, it was customary to intoxicate the slaves and exhibit them publicly in this degraded condition. By the Indians, drunkenness is looked upon as a species of insanity; and in their language, the word *ramgam*, signifying a drunkard, signifies also a madman. Both the ancients and moderns could jest as well as moralise

upon this subject. "There hangs a bottle of wine," was the derisive exclamation of the Roman soldiery, as they pointed to the body of the drunken Bonosus, who, in a fit of despair, suspended himself upon a tree. "If you wish to have a shoe of durable materials," exclaims the facetious Matthew Langsberg, "you should make the upper leather of the mouth of a hard drinker,—for that never lets in water."

If we turn from antiquity to our own times, we shall find little cause to congratulate ourselves upon any improvement. The vice has certainly diminished among the higher orders of society, but there is every reason to fear that, of late, it has made fearful strides among the lower. Thirty or forty years ago, a landlord did not conceive that he had done justice to his guests unless he sent them from his table in a state of intoxication. This practice still prevails pretty generally in Ireland and in the Highlands of Scotland, but in other parts of the kingdom it is fast giving way: and it is to be hoped that the day is not far distant when greater temperance will extend to these jovial districts, and render their hospitality a little more consonant with prudence and moderation. The increase of drunkenness among the lower classes may be imputed to various causes, and chiefly to the late abandonment of part of the duty on rum and whisky. This was done

with the double motive of benefiting agriculture and commerce, and of driving the "giant smuggler" from the field. The latter object it has in a great measure failed of effecting. The smuggler still plies his trade to a considerable extent, and brings his commodity to the market with nearly the same certainty of acquiring profit as ever. It would be well if the liquor vended to the poor possessed the qualities of that furnished by the contraband dealer; but, instead of this, it is usually a vile compound of every thing spurious and pestilent, and seems expressly contrived for the purpose of preying upon the vitals of the unfortunate victims who partake of it. The extent to which adulteration has been carried in all kinds of liquor, is indeed such as to interest every class of society. Wine, for instance, is often impregnated with alum and sugar of lead, the latter dangerous ingredient being resorted to by innkeepers and others, to take away the sour taste so common in bad wines. Even the colour of these liquids is frequently artificial; and the deep rich complexion so greatly admired by persons not in the secrets of the trade, is often caused, or at least heightened, by factitious additions, such as elder berries, bilberries, red-woods, &c. Alum and sugar of lead are also common in spirituous liquors; and in many cases oil of vitriol, turpentine, and other materials equally abomin-

able, are to be found in combination with them. That detestable liquor called British gin, is literally compounded of these ingredients: nor are malt liquors, with their multifarious narcotic additions, less thoroughly sophisticated or less detrimental to the health. From these circumstances, two conclusions must naturally be drawn; *viz.* that inebriating agents often contain elements of disease foreign to themselves; and that all persons purchasing them should endeavour to ascertain the state of their purity, and employ no dealer whose honour and honesty are not known to be unimpeachable. Liquors, even in their purest state, are too often injurious to the constitution without the admixture of poisons. *

The varieties of wine are so numerous as almost to defy calculation. Mr. Brande, in his table, † gives a list of no less than forty-four different kinds; and there are others which he has not enumerated. Ardent spirits are fewer in number, and may be mostly comprised under the heads of rum, gin, brandy, and

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* See Accum's Treatise on the Adulteration of Food; Child on Brewing Porter; and Shanon on Brewing and Distillation.

† See Appendix.

whisky. The first is the prevailing drink over the West Indies, North America, and such cities of Great Britain as are intimately connected with these regions by commerce. The second is extensively used in Holland and Switzerland, the countries which principally furnish it, and has found its way pretty generally over the whole of Europe. The third is chiefly produced in Charente and Languedoc, and is the spirit most commonly found in the south. The fourth is confined in a great measure to Ireland and Scotland, in which latter country the best has always been made. Of malt liquors we have many varieties. Britain, especially England, is the country which furnishes them in greatest perfection. They are the natural drinks of Englishmen—the *vinum Anglicorum*, as foreigners have often remarked. Every town of any consequence in the empire has its brewery; and in almost every one is there some difference in the quality of the liquor. Brown stout, London and Scotch porters; Burton, Dorchester, Edinburgh, and Alloa ales, are only a few of the endless varieties of these widely circulated fluids.

Besides wines, ardent spirits, and malt liquors, there are many other agents possessing inebriating properties. Among others, the *Peganum Harmala*, or Syrian rue, so often used by the sultan Solyman; the *Hibiscus Saldarissa*, which furnishes the Indian bangue, and

from which the *Nepenthes* of the ancients is supposed to have been made; the *Balsac*, or Turkish bangue, found on the shores of the Levant; the *Penang*, or Indian betle; the *Hyoscyamus Niger;* and the *Atropa Belladonna.** In addition to these, and many more, there are opium, tobacco, *Cocculus Indicus*,† and the innumerable tribes of liqueurs and others, together with other agents of a less potent nature, such as clary, darnel, and saffron. The variety of agents capable of exciting drunkenness is indeed surprising, and in proportion to their number seems the prevalence of that fatal vice to which an improper use of them gives rise.

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* "The Scots mixed a quantity of the juice of the belladonna (*solanum somniferum*) with the bread and drink which by their truce they were to supply the Danes with, which so intoxicated them that the Scots killed the greater part of Sweno's army." —*Buchanan's Hist. Scot.*

† Cocculus Indicus is sometimes thrown into ponds for the purpose of intoxicating the fishes, that they may be more easily caught.

CHAPTER II.

CAUSES OF DRUNKENNESS.

THE causes of drunkenness are so obvious, that few authors have thought it necessary to point them out: we shall merely say a few words upon the subject. There are some persons who will never be drunkards, and others who will be so in spite of all that can be done to prevent them. Some are drunkards by choice, and others by necessity. The former have an innate and constitutional fondness for liquor, and drink *con amore*. Such men are usually of a sanguineous temperament, of coarse unintellectual minds, and of low and animal propensities. They have, in general, a certain rigidity of fibre, and a flow of animal spirits which other people are without. They delight in the

roar and riot of drinking clubs; and with them, in particular, all the miseries of life may be referred to the bottle.

The drunkard by necessity was never meant by nature to be dissipated. He is perhaps a person of amiable dispositions, whom misfortune has overtaken, and who, instead of bearing up manfully against it, endeavours to drown his sorrows in liquor. It is an excess of sensibility, a partial mental weakness, an absolute misery of the heart, which drives him on. Drunkenness, with him, is a consequence of misfortune; it is a solitary dissipation preying upon him in silence. Such a man frequently dies broken-hearted, even before his excesses have had time to destroy him by their own unassisted agency.

Some become drunkards from excess of indulgence in youth. There are parents who have a common custom of treating their children to wine, punch, and other intoxicating liquors. This, in reality, is regularly bringing them up in an apprenticeship to drunkenness. Others are taught the vice by frequenting drinking clubs and masonic lodges. These are the genuine academies of tippling. Two-thirds of the drunkards we meet with, have been there initiated in that love of intemperance and boisterous irregularity which distinguish their future lives. Men who are good singers

are very apt to become drunkards, and, in truth, most of them are so, more or less, especially if they have naturally much joviality or warmth of temperament. A fine voice to such men is a fatal accomplishment.

Ebriety prevails to an alarming degree among the lower orders of society. It exists more in towns than in the country, and more among mechanics than husbandmen. Most of the misery to be observed among the working classes, springs from this source. No persons are more addicted to the habit, and all its attendant vices, than the pampered servants of the great. Innkeepers, musicians, actors, and men who lead a rambling and eccentric life, are exposed to a similar hazard. Husbands sometimes teach their wives to be drunkards by indulging them in toddy, and such fluids, every time they themselves sit down to their libations.

Women frequently acquire the vice by drinking porter and ale while nursing. These stimulants are usually recommended to them from well-meant but mistaken motives, by their female attendants. Many fine young women are ruined by this pernicious practice. Their persons become gross, their milk unhealthy, and a foundation is too often laid for future indulgence in liquor.

The frequent use of cordials, such as noyau, shrub, kirsch-wasser, curaçoa, and anissette, sometimes leads

to the practice. The active principle of these liqueurs is neither more nor less than ardent spirits.*

Among other causes, may be mentioned the excessive use of spirituous tinctures for the cure of hypochondria and indigestion. Persons who use strong tea, especially green, run the same risk. The latter species is singularly hurtful to the constitution, producing hysteria, heartburn, and general debility of the chylopoetic viscera. Some of these bad effects are relieved for a time by the use of spirits; and what was at first employed as a medicine, soon becomes an essential requisite.

Some writers allege, that unmarried women, especially if somewhat advanced in life, are more given to liquor than those who are married. This point I am unable from my own observation to decide. Women who indulge in this way, are *solitary* dram-drinkers, and so would men be, had not the arbitrary opinions of the world invested the practice in them with much less moral turpitude than in the opposite sex. Of the two sexes, there can be no doubt that men are much the more addicted to all sorts of intemperance.

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* Liqueurs often contain narcotic principles; therefore their use is doubly improper.

Drunkenness appears to be in some measure hereditary. We frequently see it descending from parents to their children. This may undoubtedly often arise from bad example and imitation, but there can be little question that, in many instances at least, it exists as a family predisposition.

Men of genius are often unfortunately addicted to drinking. Nature, as she has gifted them with greater powers than their fellows, seems also to have mingled with their cup of life more bitterness. There is a melancholy which is apt to come like a cloud over the imaginations of such characters. Their minds possess a susceptibility and a delicacy of structure which unfit them for the gross atmosphere of human nature; wherefore, high talent has ever been distinguished for sadness and gloom. Genius lives in a world of its own: it is the essence of a superior nature—the loftier imaginings of the mind, clothed with a more spiritual and refined verdure. Few men endowed with such faculties enjoy the ordinary happiness of humanity. The stream of their lives runs harsh and broken. Melancholy thoughts sweep perpetually across their souls; and if these be heightened by misfortune, they are plunged into the deepest misery.

To relieve these feelings, many plans have been

adopted. Dr. Johnson fled for years to wine under his habitual gloom. He found that the pangs were removed while its immediate influence lasted, but he also found that they returned with double force when that influence passed away. He saw the dangerous precipice on which he stood, and, by an unusual effort of volition, gave it over. In its stead he substituted tea; and to this milder stimulus had recourse in his melancholy. Voltaire and Fontenelle, for the same purpose, used coffee. The excitements of Newton and Hobbes were the fumes of tobacco, while Demosthenes and Haller were sufficiently stimulated by drinking freely of cold water. Such are the differences of constitution.

"As good be melancholy still, as drunken beasts and beggars." So says old Burton, in his Anatomy of Melancholy, and there are few who will not subscribe to his creed. The same author quaintly, but justly, remarks, "if a drunken man gets a child, it will never, likely, have a good brain." Dr. Darwin, a great authority on all subjects connected with life, says, that he never knew a glutton affected with the gout, who was not at the same time addicted to liquor. He also observes, "it is remarkable that all the diseases from drinking spirituous or fermented liquors are liable to become hereditary, even to the third generation,

gradually increasing, if the cause be continued, till the family becomes extinct." *

We need not endeavour to trace farther the remote causes of drunkenness. A drunkard is rarely able to recall the particular circumstances which made him so. The vice creeps upon him insensibly, and he is involved in its fetters before he is aware. It is enough that we know the proximate cause, and also the certain consequences. One thing is certain, that a man who addicts himself to intemperance, can never be said to be sound in mind or body. The former is in a state of partial insanity, while the effects of the liquor remain; and the latter is always more or less diseased in its actions.

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* Botanic Garden.

CHAPTER III.

PHENOMENA OF DRUNKENNESS.

THE consequences of drunkenness are dreadful, but the pleasures of getting drunk are certainly ecstatic. While the illusion lasts, happiness is complete; care and melancholy are thrown to the wind, and Elysium with all its glories, descends upon the dazzled imagination of the drinker.

Some authors have spoken of the pleasure of being completely drunk: this, however, is not the most exquisite period. The time is when a person is neither "drunken nor sober, but neighbour to both," as Bishop Andrews says in his "Ex—ale—tation of Ale." The moment is when the ethereal emanations begin to float around the brain—when the soul is commencing

to expand its wings and rise from earth—when the tongue feels itself somewhat loosened in the mouth, and breaks the previous taciturnity, if any such existed.

What are the sensations of incipient drunkenness? First, an unusual serenity prevails over the mind, and the soul of the votary is filled with a placid satisfaction. By degrees he is sensible of a soft and not unmusical humming in his ears, at every pause of the conversation. He seems, to himself, to wear his head lighter than usual upon his shoulders. Then a species of obscurity, thinner than the finest mist, passes before his eyes, and makes him see objects rather indistinctly. The lights begin to dance and appear double. A gaiety and warmth are felt at the same time about the heart. The imagination is expanded, and filled with a thousand delightful images. He becomes loquacious, and pours forth, in enthusiastic language, the thoughts which are born, as it were, within him.

Now comes a spirit of universal contentment with himself and all the world. He thinks no more of misery: it is dissolved in the bliss of the moment. This is the acme of the fit—the ecstacy is now perfect. As yet the sensorium is in tolerable order: it is only shaken, but the capability of thinking with accuracy still remains. About this time, the drunkard pours out all the secrets of his soul. His qualities, good or

bad, come forth without reserve; and now, if at any time, the human heart may be seen into. In a short period, he is seized with a most inordinate propensity to talk nonsense, though he is perfectly conscious of doing so. He also commits many foolish things, knowing them to be foolish. The power of volition, that faculty which keeps the will subordinate to the judgment, seems totally weakened. The most delightful time seems to be that immediately before becoming very talkative. When this takes place, a man turns ridiculous, and his mirth, though more boisterous, is not so exquisite. At first the intoxication partakes of sentiment, but, latterly, it becomes merely animal.

After this the scene thickens. The drunkard's imagination gets disordered with the most grotesque conceptions. Instead of moderating his drink, he pours it down more rapidly than ever: glass follows glass with reckless energy. His head becomes perfectly giddy. The candles burn blue, or green, or yellow; and where there are perhaps only three on the table, he sees a dozen. According to his temperament, he is amorous, or musical, or quarrelsome. Many possess a most extraordinary wit; and a great flow of spirits is a general attendant. In the latter stages, the speech is thick, and the use of the tongue in a great measure lost. His mouth is half open, and

idiotic in the expression; while his eyes are glazed, wavering, and watery. He is apt to fancy that he has offended some one of the company, and is ridiculously profuse with his apologies. Frequently he mistakes one person for another, and imagines that some of those before him are individuals who are, in reality, absent, or even dead. The muscular powers are, all along, much affected: this indeed happens before any great change takes place in the mind, and goes on progressively increasing. He can no longer walk with steadiness, but totters from side to side. The limbs become powerless, and inadequate to sustain his weight. He is, however, not always sensible of any deficiency in this respect: and, while exciting mirth by his eccentric motions, imagines that he walks with the most perfect steadiness. In attempting to run, he conceives that he passes over the ground with astonishing rapidity. The last stage of drunkenness is total insensibility. The man tumbles perhaps beneath the table, and is carried away in a state of stupor to his couch. In this condition he is said to be *dead drunk.*

When the drunkard is put to bed, let us suppose that his faculties are not totally absorbed in apoplectic stupor; let us suppose that he still possesses consciousness and feeling, though these are both disordered; then begins "the tug of war;" then comes the misery

which is doomed to succeed his previous raptures. No sooner is his head laid upon the pillow than it is seized with the strangest throbbing. His heart beats quick and hard against the ribs. A noise like the distant fall of a cascade, or rushing of a river, is heard in his ears: sough—sough—sough, goes the sound. His senses now become more drowned and stupified. A dim recollection of his carousals, like a shadowy and indistinct dream, passes before the mind. He still hears, as in echo, the cries and laughter of his companions. Wild fantastic fancies accumulate thickly around the brain. His giddiness is greater than ever; and he feels as if in a ship tossed upon a heaving sea. At last he drops insensibly into a profound slumber.

In the morning he awakes in a high fever. The whole body is parched; the palms of the hands, in particular, are like leather. His head is often violently painful. He feels excessive thirst; while his tongue is white, dry, and stiff. The whole inside of the mouth is likewise hot and constricted, and the throat often sore. Then look at his eyes—how sickly, dull, and languid! The fire, which first lighted them up the evening before, is all gone. A stupor like that of the last stage of drunkenness, still clings about them, and they are disagreeably affected by the light. The complexion sustains as great a change: it is no longer flushed with

gaiety and excitation, but pale and wayworn, indicating a profound mental and bodily exhaustion. There is probably sickness, and the appetite is totally gone. Even yet the delirium of intoxication has not left him, for his head still rings, his heart still throbs violently; and if he attempt getting up, he stumbles with giddiness. The mind also is sadly depressed, and the proceedings of the previous night are painfully remembered. He is sorry for his conduct, promises solemnly never again so to commit himself, and calls impatiently for something to quench his thirst. Such are the usual phenomena of a fit of drunkenness.

In the beginning of intoxication we are inclined to sleep, especially if we indulge alone. In companies, the noise and opportunity of conversing prevent this; and when a certain quantity has been drunk, the drowsy tendency wears away. A person who wishes to stand out well, should never talk much. This increases the effects of the liquor, and hurries on intoxication. Hence, every experienced drunkard holds it to be a piece of prudence to keep his tongue under restraint.

The giddiness of intoxication is always greater in darkness than in the light. I know of no rational way in which this can be explained; but, certain it is, the drunkard never so well knows his true condition as

when alone and in darkness. Possibly the noise and light distracted the mind, and made the bodily sensations be, for the time, in some measure unfelt.

There are some persons who get sick from drinking even a small quantity; and this sickness is, upon the whole, a favourable circumstance, as it proves an effectual curb upon them, however much they might be disposed to intemperance.

Intoxication, before it proceeds too far, has a powerful tendency to increase the appetite. Perhaps it would be more correct to say, that inebriating liquors, by stimulating the stomach, have this power. We often see gluttony and drunkenness combined together at the same time. This continues till the last stage, when, from overloading, and excess of irritation, the stomach expels its contents by vomiting.

All along, the action of the kidneys is much increased, especially at the commencement of intoxication.

When a large quantity of intoxicating fluid has been suddenly taken into the stomach, the usual preliminary symptoms of drunkenness do not appear. An instantaneous stupefaction ensues; and the person is at once knocked down. This cannot be imputed to distention of the cerebral vessels, but to a sudden operation on the nervous branches of the stomach. The brain is thrown into a state of collapse, and many of its functions sus-

pended. In such cases, the face is not, at first, tumid and ruddy, but pale and contracted. The pulse is likewise feeble, and the body cold and powerless. When re-action takes place, these symptoms wear off, and those of sanguineous apoplexy succeed; such as turgid countenance, full but slow pulse, and strong stertorous breathing. The vessels of the brain have now become filled, and there is a strong determination to that organ.

Persons of tender or compassionate minds are particularly subject, during intoxication, to be affected to tears at the sight of any distressing object, or even on hearing an affecting tale. Drunkenness, in such characters, may be said to melt the heart, and open up the fountains of sorrow. Their sympathy is often ridiculous, and aroused by the most trifling causes. Those who have a lively imagination, combined with this tenderness of heart, sometimes conceive fictitious cases of distress, and weep bitterly at the woe of their own creating.

During a paroxysm of drunkenness, the body is much less sensible to external stimuli than at other times: it is particularly capable of resisting cold. Seamen, when absent on shore, are prone to get intoxicated; and they will frequently lie for hours on the highway, even in the depth of winter, without any bad consequences.

A drunk man seldom shivers from cold. His frame seems steeled against it, and he holds out with an apathy which is astonishing. The body is, in like manner, insensible to injuries, such as cuts, bruises, &c. He frequently receives, in fighting, the most severe blows, without seemingly feeling them, and without, in fact, being aware of the matter till sobered. Persons in intoxication have been known to chop off their fingers, and otherwise disfigure themselves, laughing all the while at the action. But when the paroxysm is off, and the frame weakened, things are changed. External agents are then withstood with little vigour, with even less than in the natural state of the body. The person shivers on the slightest chill, and is more than usually subject to fevers and all sorts of contagion.

External stimuli frequently break the fit. Men have been instantly sobered by having a bucket of cold water thrown upon them, or by falling into a stream. Strong emotions of the mind produce the same effect, such as a sense of danger, or a piece of good or bad news, suddenly communicated.

There are particular situations and circumstances in which a man can stand liquor better than in others. In the close atmosphere of a large town, he is soon overpowered; and it is here that the genuine drunkard is to be met with in the greatest perfection. In the

country, especially in a mountainous district, or on the sea-shore, where the air is cold and piercing, a great quantity may be taken with impunity. The Highlanders drink largely of ardent spirits, and they are often intoxicated, yet, among them, there are comparatively few who can be called habitual drunkards. A keen air seems to deaden its effects, and it soon evaporates from their constitutions. Sailors and soldiers who are hard wrought, also consume enormous quantities without injury: porters and all sorts of labourers do the same. With these men exercise is a corrective; but in towns, where no counteracting agency is employed, it acts with irresistible power upon the frame, and soon proves destructive.

A great quantity of liquors may also be taken without inebriating, in certain diseases, such as spasm, tetanus, gangrene, and retrocedent gout.

Vertigo, from ordinary causes, has a strong tendency to produce sickness, but that from drunkenness does not seem to have this effect, at least not to any considerable degree. The nausea and sickness sometimes occurring in intoxication, proceed almost entirely from the surcharged and disordered state of the stomach, and very little, if at all, from the accompanying giddiness.

All kinds of intoxicating agents act much more

rapidly and powerfully upon an empty than upon a full stomach.

The stomach may get accustomed to a strong stimulus, and resist it powerfully, while it yields to one much weaker. I have known people who could drink eight or ten glasses of raw spirits at a sitting without feeling them much, become perfectly intoxicated by half the quantity made into toddy. In like manner, he who is in the constant habit of using one spirit—rum, for instance—cannot, for the most part, indulge to an equal extent in another, without experiencing more severe effects than if he had partaken of his usual beverage. This happens even when the strength of the two liquors is the same.

The mind exercises a considerable effect upon drunkenness, and may often control it powerfully. When in the company of a superior whom we respect, or of a female in whose presence it would be indelicate to get intoxicated, a much greater portion of liquor may be withstood than in societies where no such restraints operate.

Some drunkards retain their senses after the physical powers are quite exhausted. Others, even when the mind is wrought to a pitch leading to the most absurd actions, preserve a degree of cunning and observation which enables them to elude the tricks which their

companions are preparing to play upon them. In such cases, they display great address, and take the first opportunity of retaliating; or, if such does not occur, of slipping out of the room unobserved and getting away. Some, while the whole mind seems locked up in the stupor of forgetfulness, hear all that is going on. No one should ever presume on the intoxicated state of another to talk of him detractingly in his presence. While apparently deprived of all sensation, he may be an attentive listener; and whatever is said, though unheeded at the moment, is not forgotten afterwards, but treasured carefully up in the memory. Much discord and ill-will frequently arise from such imprudence.

There are persons who are exceedingly profuse, and fond of giving away their money, watches, rings, &c. to the company. This peculiarity will never, I believe, be found in a miser: avarice is a passion strong under every circumstance. Drinking does not loosen the grasp of the covetous man, or open his heart. He is for ever the same.

The generality of people are apt to talk of their private affairs when intoxicated. They then reveal the most deeply hidden secrets to their companions. Others have their minds so happily constituted that nothing escapes them. They are, even in their most unguarded moments, secret and close as the grave.

The natural disposition may be better discovered in drunkenness than at any other time.* In modern society, life is all a disguise. Every man walks in masquerade, and his most intimate friend very often does not know his real character. Many wear smiles constantly upon their cheeks, whose hearts are unprincipled and treacherous. Many with violent tempers have all the external calm and softness of charity itself. Some speak always with sympathy, who, at soul, are full of gall and bitterness. Intoxication tears off the veil, and sets each in his true light, whatever that may be. The combative man will quarrel, the sensualist will love, the detractor will abuse his neighbour. I have known exceptions, but they are few in number. At one time they seemed more numerous, but closer observation convinced me that most of those whom I thought drunkenness had libelled, inherited, at bottom, the genuine dispositions which it brought forth.

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* "*In vino veritas.*"

CHAPTER IV.

DRUNKENNESS MODIFIED BY TEMPERAMENT.

UNDER the last head I have described the usual phenomena of intoxication; but it is necessary to remark, that these are apt to be modified by the physical and moral frame of the drinker. Great diversity of opinion exists with regard to the doctrine of the temperaments: the ancients, and Richerand * and others among the moderns, affirming, and Spurzheim † denying their existence. Into this controversy it is needless to enter. All I contend for is, that the bodily and mental consti-

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* Nouveaux Elemens de Physiologie.

† Observations sur la Phrænologie.

tution of every man is not alike, and that on these peculiarities depend certain differences during a paroxysm of drunkenness.

I. *Sanguineous Drunkard.*—The sanguine temperament seems to feel most intensely the excitement of the bottle. Persons of this stamp have usually a ruddy complexion, thick neck, small head, and strong muscular fibre. Their intellect is in general *mediocre*, for great bodily strength and corresponding mental powers are rarely united together. In such people, the animal propensities prevail over the moral and intellectual ones. They are prone to combativeness and sensuality, and are either very good-natured or extremely quarrelsome. All their passions are keen: like the Irish women, they will fight for their friends or with them as occasion requires. They are talkative from the beginning, and, during confirmed intoxication, perfectly obstreperous. It is men of this class who are the heroes of all drunken companies, the patrons of masonic lodges, the presidents and getters-up of jovial meetings. With them, eating and drinking are the grand ends of human life. Look at their eyes, how they sparkle at the sight of wine, and how their lips smack and their teeth water in the neighbourhood of a good dinner: they would scent out a banquet in Siberia. When intoxicated, their passions

are highly excited: the energies of a hundred minds then seem concentrated into one focus. Their mirth, their anger, their love, their folly, are all equally intense and unquenchable. Such men cannot conceal their feelings. In drunkenness, the veil is removed from them, and their characters stand revealed, as in a glass, to the eye of the beholder. The Roderick Random of Smollett had much of this temperament, blended, however, with more intellect than usually belongs to it.

II. *Melancholy Drunkard.*—Melancholy, in drunkards, sometimes arises from temperament, but more frequently from habitual intoxication or misfortune. Some men are melancholy by nature, but become highly mirthful when they have drunk a considerable quantity. Men of this tone of mind seem to enjoy the bottle more exquisitely than even the sanguineous class. The joyousness which it excites breaks in upon their gloom like sunshine upon darkness. Above all, the sensations, at the moment when mirth begins with its magic to charm away care, are inexpressible. Pleasure falls in showers of fragrance upon their souls; they are at peace with themselves and all mankind, and enjoy, as it were, a foretaste of paradise. Robert Burns was an example of this variety. His melancholy was consti-

tutional, but heightened by misfortune. The bottle commonly dispelled it, and gave rise to the most delightful images; sometimes, however, it only aggravated the gloom.

III. *Surly Drunkard.*—Some men are not excited to mirth by intoxication. On the contrary, it renders them gloomy and discontented. Even those who in the sober state are sufficiently gay, become occasionally thus altered. A great propensity to take offence is a characteristic among persons of this temperament, They are suspicious, and very often mischievous. If at some former period they have had a difference with any of the company, they are sure to revive it, although, probably, it has been long ago cemented on both sides, and even forgotten by the other party. People of this description are very unpleasant companions. They are in general so foul-tongued, quarrelsome, and indecent in conversation, that established clubs of drinkers have made it a practice to exclude them from their society.

IV. *Phlegmatic Drunkard.*—Persons of this temperament are heavy-rolling machines, and, like the above, are not roused to mirth by liquor. Their vital actions are dull and spiritless—the blood in their veins

as sluggish as the river Jordan, and their energies stagnant as the Dead Sea. They are altogether a negative sort of beings with passions too inert to lead them to any thing very good or very bad. They are a species of animated clods, but not thoroughly animated—for the vital fire of feeling has got cooled in penetrating their frozen frames. A new Prometheus would require to breathe into their nostrils, to give them the ordinary glow and warmth of humanity. Look at a phlegmatic man—how dead, passionless, and uninspired is the expression of his clammy lips and vacant eye! Speak to him—how cold, slow, and tame is his conversation! The words come forth as if they were drawn from his mouth with a pair of pincers; and the ideas are as frozen as if concocted in the bowels of Lapland. Liquor produces no effect upon his mental powers; or, if it does, it is a smothering one. The whole energies of the drink fall on his almost impassive frame. From the first, his drunkenness is stupifying; he is seized with a kind of lethargy, the white of his eyes turns up, he breathes loud and harshly, and sinks into an apoplectic stupor. Yet all this is perfectly harmless, and wears away without leaving any mark behind it. Such persons are very apt to be played upon by their companions. There are few men who, in their younger days, have not assisted in

shaving the heads and painting the faces of these lethargic drunkards.

V. *Nervous Drunkard.*—This is a very harmless and very tiresome personage. Generally of a weak mind and irritable constitution, he does not become boisterous with mirth, and rarely shows the least glimmering of wit or mental energy. He is talkative and fond of long-winded stories, which he tells in a drivelling, silly manner. Never warmed into enthusiasm by liquor, he keeps chatting at some ridiculous tale, very much in the way of a garrulous old man in his dotage.*

VI. *Choleric Drunkard.*—There are a variety of drunkards whom I can only class under the above title. They seem to possess few of the qualities of the other races, and are chiefly distinguished by an uncommon testiness of disposition. They are quick, irritable, and impatient, but withal good at heart, and, when in

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* The old gentleman who is represented as speaking, in Bunbury's admirable caricature of the "Long Story," furnishes one of the best illustrations I have ever seen of this variety. It is worth consulting both on account of the story-teller, and the effect his tedious garrulity produces upon the company.

humour, very pleasant and generous. They are easily put out of temper, but it returns almost immediately. This disposition is very prevalent among Welshmen and Highland lairds. Mountaineers are usually quick-tempered; but such men are not the worst or most unpleasant. Sterne is undoubtedly right when he says that more virtue is to be found in warm than in cold dispositions. Commodore Trunnion is a marked example of this temperament; and Captain Fluellen, who compelled the *heroic* Pistol to eat the leek, is another.

VII. *Periodical Drunkard.*—There are persons whose temperaments are so peculiarly constituted, that they indulge to excess *periodically,* and are, in the intervals of these indulgences, remarkably sober. This is not a very common case, but I have known more than one instance of it; and a gentleman, distinguished by the power of his eloquence in the senate and at the bar, is said to furnish another. In the cases which I have known, the drunken mania, for it can get no other name, came on three or four times a-year. The persons, from a state of complete sobriety, felt the most intense desire for drink; and no power short of absolute force or confinement could restrain them from the indulgence. In every case they seemed to be quite

aware of the uncontrollable nature of their passion, and proceeded systematically by confining themselves to their room, and procuring a large quantity of ardent spirits. As soon as this was done, they commenced and drank to excess till vomiting ensued, and the stomach absolutely refused to receive another drop of liquor. This state may last a few days or a few weeks, according to constitutional strength, or the rapidity with which the libations are poured down. During the continuance of the attack, the individual exhibits such a state of mind as may be looked for from his peculiar temperament: he may be sanguineous, or melancholy, or surly, or phlegmatic, or nervous, or choleric. So soon as the stomach rejects every thing that is swallowed, and severe sickness comes on, the fit ceases. From that moment, recovery takes place, and his former fondness for liquor is succeeded by aversion or disgust. This gains such ascendency over him, that he abstains religiously from it for weeks, or months, or even for a year, as the case may be. During this interval, he leads a life of the most exemplary temperance, drinking nothing but cold water, and probably shunning every society where he is likely to be exposed to indulgence. So soon as this period of sobriety has expired, the fit again comes on; and he continues playing the same game for perhaps the better

part of a long life. This class of persons I would call periodical drunkards.

These different varieties are sometimes found strongly marked; at other times so blended together that it is not easy to say which predominates. The most agreeable drunkard is he whose temperament lies between the sanguineous and the melancholic. The genuine sanguineous is a sad noisy dog, and so common, that every person must have met with him. The naval service furnishes a great many gentlemen of this description. The phlegmatic, I think, is rarer, but both the nervous and the surly are not unusual.

CHAPTER V.

DRUNKENNESS MODIFIED BY THE INEBRIATING AGENT.

INTOXICATION is not only influenced by temperament, but by the nature of the agent which produces it. Thus, ebriety from ardent spirits differs in some particulars from that brought on by opium or malt liquors, such as porter and ale.

I. *Modified by Ardent Spirits.*—Alcohol is the principle of intoxication in all liquors. It is this which gives to wine,* ale, and spirits, their characteristic

* Alcohol appears to exist in wines, in a very peculiar state

properties. In the natural state, however, it is so pungent, that it could not be received into the stomach, even in a moderate quantity, without producing death. It can, therefore, only be used in dilution; and in this state we have it from the strongest ardent spirits, to simple small beer. The first (ardent spirits) being the most concentrated of its combinations, act most rapidly upon the constitution. They are more inflammatory, and intoxicate sooner than any of the others. Swallowed in an overdose, they act almost instantaneously —extinguishing the senses and overcoming the whole body with a sudden stupor. When spirits are swallowed raw, as in the form of a dram, they excite a glow of heat in the throat and stomach, succeeded, in those who are not much accustomed to their use, by a flushing of the countenance, and a copious discharge of tears. They are strongly diuretic.

Persons who indulge too much in spirits rarely get corpulent, unless their indulgence be coupled with good living. Their bodies become emaciated; they get spindle-shanked; their eyes are glazed and hollow; their cheeks fall in; and a premature old age overtakes

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of combination. In the Appendix, I have availed myself of Dr. Paris's valuable remarks on this subject.

them. They do not eat so well as their brother drunkards. An insatiable desire for a morning dram makes them early risers, and their breakfast amounts to almost nothing.

The principal varieties of spirits, as already mentioned, are rum, brandy, whisky, and gin. It is needless to enter into any detail of the history of these fluids. Brandy kills soonest; it takes most rapidly to the head, and, more readily than the others, tinges the face to a crimson or livid hue. Rum is probably the next in point of fatality; and, after that, gin and whisky. The superior diuretic qualities of the two latter, and the less luscious sources from which they are procured, may possibly account for such differences. I am at the same time aware that some persons entertain a different idea of the relative danger of these liquors; some, for instance, conceive that gin is more rapidly fatal than any of them; but it is to be remembered, that it, more than any other ardent spirit, is liable to adulteration. That, from this circumstance, more lives may be lost by its use, I do not deny. In speaking of gin, however, and comparing its effects with those of the rest of the class to which it belongs, I must be understood to speak of it in its pure condition, and not in that detestable state of sophistication in

which such vast quantities of it are drunk in London and elsewhere. When pure, I have no hesitation in affirming that it is decidedly more wholesome than either brandy or rum; and that the popular belief of its greater tendency to produce dropsy, is quite unfounded.

An experiment has lately been made for the purpose of ascertaining the comparative powers of gin, brandy, and rum upon the human body, which is not less remarkable for the inconsequent conclusions deduced from it, than for the ignorance it displays in confounding dead animal matter with the living fibre. It was made as follows:—

A piece of raw liver was put into a glass of gin, another into a glass of rum, and a third into a glass of brandy. That in the gin was, in a given time, partially decomposed; that in the rum, in the same time, not diminished; and that in the brandy quite dissolved. It was concluded, from these results, that rum was the most wholesome spirit of the three, and brandy the least. The inferences deduced from these premises are not only erroneous, but glaringly absurd; the premises would even afford grounds for drawing results of the very opposite nature: it might be said, for instance, that though brandy be capable of dissolving dead animal matter, there is no evidence that it can

do the same to the living stomach, and that it would in reality prove less hurtful than the others, in so far as it would, more effectually than they, dissolve the food contained in that organ. These experiments, in fact, prove nothing; and could only have been suggested by one completely ignorant of the functions of the animal economy. There is a power inherent in the vital principle which resists the laws that operate upon dead matter. This is known to every practitioner, and is the reason why the most plausible and recondite speculations of chemistry have come to naught in their trials upon the living frame. The only way to judge of the respective effects of ardent spirit, is by experience and physiological reasoning, both of which inform us that the spirit most powerfully diuretic and least nourishing for the blood, must rank highest in the scale of safety.

II. *Modified by Wines.*—Drunkenness from wines closely resembles that from ardent spirits. It is equally airy and volatile, more especially if the light wines, such as Champaign, Claret, Chambertin, or Volnay, be drunk. On the former, a person may get tipsy several times of a night. The fixed air evolved from it produces a feeling analagous to ebriety, independent of the spirit it contains. Port, Sherry, and Madeira are

heavier wines, and have a stronger tendency to excite headach and fever.

The wine-bibber has usually an ominous rotundity of face, and, not unfrequently, of corporation. His nose is well studded over with carbuncles of the Claret complexion; and the red of his cheeks resembles very closely the hue of that wine. The drunkard from ardent spirits is apt to be a poor, miserable, emaciated figure, broken in mind and in fortune; but the votary of the juice of the grape may usually boast the "paunch well-lined with capon," and calls to recollection the bluff figure of Sir John Falstaff over his potations of Sack.*

III. *Modified by Malt Liquors.*—Malt liquors, under which title we include all kinds of porter and ales, produce the worst species of drunkenness; as, in

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* There is reason to believe that the Sack of Shakspeare was Sherry.—"*Falstaff.* You rogue! here's *lime* in this Sack too. There is nothing but roguery to be found in villanous man. Yet a coward is worse than a cup of Sack with lime in it."—Lime, it is well known, is added to the grapes in the manufacture of Sherry. This not only gives the wine what is called its dry quality, but probably acts by neutralising a portion of the malic or tartaric acid.

addition to the intoxicating principle, some noxious ingredients are usually added, for the purpose of preserving them and giving them their bitter. The hop of these fluids is highly narcotic, and brewers often add other substances, to heighten its effect, such as hyoscyamus, * opium, belladonna, cocculus Indicus, lauro cerasus, &c. Malt liquors, therefore, act in two ways

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* The intoxicating properties of hyoscyamus appear to have been known from a very early period. It was with this plant that the Assassin Prince, commonly called the "Old Man of the Mountain," inebriated his followers, preparatory to installing them into his service. The following eloquent passage from a modern writer will prove interesting:—

"There was at Alamoot, and also at Masiat, in Syria, a delicious garden, encompassed with lofty walls, adorned with trees and flowers of every kind—with murmuring brooks and translucent lakes—with bowers of roses and trelisses of the vine—airy halls and splendid kiosks, furnished with carpets of Persia and silks of Byzantium. Beautiful maidens and blooming boys were the inhabitants of this delicious spot, which resounded with the melody of birds, the murmur of streams, and the tones and voices of instruments—all respired contentment and pleasure. When the Chief had noticed any youth to be distinguished for strength and resolution, he invited him to a banquet, where he placed him beside himself, conversed with him on the happiness reserved for the faithful, and contrived to administer to him an intoxicating draught, prepared from the *hyoscyamus*. While

upon the body, partly by the alcohol they contain, and partly by the narcotic principle. In addition to this, the fermentation which they undergo is much less perfect than that of spirits or wine. After being swallowed, this process is carried on in the stomach, by which fixed air is copiously liberated, and the digestion of delicate stomachs materially impaired. Cider, spruce, ginger, and table beers, in consequence of their

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insensible, he was conveyed to the garden of delight, and there awakened by the application of vinegar. On opening his eyes, all Paradise met his view; the black-eyed and blue-robed houris surrounded him, obedient to his wishes: sweet music filled his ears; the richest viands were served up in the most costly vessels, and the choicest wines sparkled in golden cups. The fortunate youth believed himself really in the Paradise of the Prophet, and the language of his attendants confirmed the delusion. When he had had his fill of enjoyment, and nature was yielding to exhaustion, the opiate was again administered, and the sleeper transported back to the side of the Chief, to whom he communicated what had passed, and who assured him of the truth and reality of all he had experienced, telling him such was the bliss reserved for the obedient servants of the Imaum, and enjoining, at the same time, the strictest secrecy. Ever after, the rapturous vision possessed the imagination of the deluded enthusiast, and he panted for the hour when death, received in obeying the commands of his superior, should dismiss him to the bowers of Paradise."—*Von Hammer's Hist. of the Assassins.*

imperfect fermentation, often produce the same bad effects, long after their first briskness has vanished.

Persons addicted to malt liquors increase enormously in bulk. They become loaded with fat: their chin gets double or triple, the eye prominent, and the whole face bloated and stupid. Their circulation is clogged, while the pulse feels like a cord, and is full and labouring, but not quick. During sleep, the breathing is stertorous. Every thing indicates an excess of blood; and when a pound or two is taken away, immense relief is obtained. The blood, in such cases, is more dark and sizy than in the others. In seven cases out of ten, malt liquor drunkards die of apoplexy or palsy. If they escape this hazard, swelled liver or dropsy carries them off. The abdomen seldom loses its prominency, but the lower extremities get ultimately emaciated. Profuse bleedings frequently ensue from the nose, and save life, by emptying the blood-vessels of the brain.

The drunkenness in question is peculiarly of British growth. The most noted examples of it are to be found in innkeepers and their wives, recruiting serjeants, guards of stage-coaches, &c. The quantity of malt liquors which such persons will consume in a day is prodigious. Seven English pints is quite a common allowance, and not unfrequently twice that quantity is

taken without any perceptible effect. Many of the coal-heavers on the Thames think nothing of drinking daily two gallons of porter, especially in the summer season, when they labour under profuse perspirations. A friend has informed me that he knew an instance of one of them having consumed eighteen pints in one day, and he states that there are many such instances.

The effects of malt liquors on the body, if not so immediately rapid as those of ardent spirits, are more stupifying, more lasting, and less easily removed. The last are particularly prone to produce levity and mirth, but the first have a stunning influence upon the brain, and, in a short time, render dull and sluggish the gayest disposition. They also produce sickness and vomiting more readily than either spirits or wine.

Both wine and malt liquors have a greater tendency to swell the body than ardent spirits. They form blood with greater rapidity, and are altogether more nourishing. The most dreadful effects, upon the whole, are brought on by spirits, but drunkenness from malt liquors is the most speedily fatal. The former break down the body by degrees; the latter operate by some instantaneous apoplexy or rapid inflammation.

No one has ever given the respective characters of

the malt liquor and ardent spirit drunkard with greater truth than Hogarth, in his Beer Alley and Gin Lane. The first is represented as plump, rubicund, and bloated; the second as pale, tottering, and emaciated, and dashed over with the aspect of blank despair.

IV. *Modified by Opium.*—The drunkenness produced by opium has also some characteristics which it is necessary to mention. This drug is principally employed by the Mahometans. By their religion these people are forbidden the use of wine,* and use opium as a substitute. And a delightful substitute it is while the first excitation continues; for the images it occasions in the mind are more exquisite than any produced even by wine.

There is reason to believe that the use of this medicine has, of late years, gained ground in Great Britain. We are told by the "English Opium-Eater,"† whose

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* "The law of Mahomet which prohibits the drinking of wine, is a law fitted to the climate of Arabia; and, indeed, before Mahomet's time, water was the common drink of the Arabs. The law which forbade the Carthaginians to drink wine, was also a law of the climate."—*Montesquieu, Book* xiv., *Chap.* x.

† London Magazine, Vols. IV. and VI. Old Series.

powerful and interesting " Confessions" have excited so deep an interest, that the practice exists among the work people at Manchester. Many of our fashionable ladies have recourse to it when troubled with vapours, or low spirits: some of them even carry it about with them for the purpose. This practice is most pernicious, and no way different from that of drunkards, who swallow wine and other liquors to drive away care. While the first effects continue, the intended purpose is sufficiently gained, but the melancholy which follows is infinitely greater than can be compensated by the previous exhilaration.

Opium acts differently on different constitutions. While it disposes some to calm, it arouses others to fury. Whatever passion predominates at the time, it increases; whether it be love, or hatred, or revenge, or benevolence. Lord Kames, in his Sketches of Man, speaks of the fanatical Faquirs, who, when excited by this drug, have been known, with poisoned daggers, to assail and butcher every European whom they could overcome. In the century before last, one of this nation attacked a body of Dutch sailors, and murdered seventeen of them in one minute. The Malays are strongly addicted to opium. When violently aroused by it, they sometimes perform what is called *Running-a-Muck*, which consists in rushing out in a state of

phrenzied excitement, heightened by fanaticism, and murdering every one who comes in their way. The Turkish commanders are well aware of the powers of this drug in inspiring an artificial courage; and frequently give it to their men when they put them on any enterprise of great danger.

Some minds are rendered melancholy by opium. Its usual effect, however, is to give rise to lively and happy sensations. The late Duchess of Gordon is said to have used it freely, previous to appearing in great parties, where she wished to shine by the gaiety of her conversation and brilliancy of her wit. A celebrated pleader at the Scotch bar is reported to do the same thing, and always with a happy effect.

In this country opium is much used, but seldom with the view of producing intoxication. Some, indeed, deny that it can do so, strictly speaking. If by intoxication is meant a state precisely similar to that from over-indulgence in vinous or spirituous liquors, they are undoubtedly right; but drunkenness merits a wider latitude of signification. The ecstacies of opium are much more entrancing than those of wine. There is more poetry in its visions—more mental aggrandisement—more range of imagination. Wine, in common with it, invigorates the animal powers and propensities, but opium, in a more peculiar

manner, strengthens those proper to man, and gives, for a period amounting to hours, a higher tone to the intellectual faculties. It inspires the mind with a thousand delightful images, lifts the soul from earth, and casts a halo of poetic thought and feeling over the spirits of the most unimaginative. Under its influence, the mind wears no longer that blank passionless aspect which, even in gifted natures, it is apt to assume. On the contrary, it is clothed with beauty, "as with a garment," and colours every thought that passes through it with the hues of wonder and romance. Such are the feelings which the luxurious and opulent Mussulman seeks to enjoy. To stir up the languid current of his mind, satiated with excess of pleasure, and rendered sluggish by indolence, he has recourse to that remedy which his own genial climate produces in greatest perfection. Seated perhaps amid the luxuries of Oriental splendour —with fountains bubbling around, and the citron shading him with its canopy, and scattering perfume on all sides—he lets loose the reins of an imagination, conversant from infancy with every thing gorgeous and magnificent. The veil which shades the world of fancy is withdrawn, and the wonders lying behind it exposed to view: he sees palaces and temples in the clouds; or the Paradise of Mahomet, with its

houris and bowers of amaranth, may stand revealed to his excited senses. Every thing is steeped in poetic exaggeration. The zephyrs seem converted into aerial music, the trees bear golden fruit, the rose blushes with unaccustomed beauty and perfume. Earth, in a word, is brought nearer to the sky, and becomes one vast Eden of pleasure. Such are the first effects of opium; but in proportion as they are great, so is the depression which succeeds them. Languor and exhaustion invariably come after; to remove which, the drug is again had recourse to, and becomes almost an essential of existence.

Opium retains at all times its power of exciting the imagination, provided sufficient doses are taken. But, when it has been continued so long as to bring disease upon the constitution, the pleasurable feelings wear away, and are succeeded by others of a very different kind. Instead of disposing the mind to be happy, it now acts upon it like the spell of a demon, and calls up phantoms of horror and disgust. The fancy is still as powerful as ever, but it is turned in another direction. Formerly it clothed all objects with the light of heaven; now it invests them with the attributes of hell. Goblins, spectres, and every kind of distempered vision haunt the mind, peopling it with dreary and revolting imagery. The sleep is no longer

cheered with its former sights of happiness. Frightful dreams usurp their place, till, at last, the person becomes the victim of an almost perpetual misery.*

Opium resembles the other agents of intoxication in this, that the fondness for it increases with use, and

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* The following description, by a modern traveller, of a scene witnessed by him in the East, gives a lively picture of the effects of this drug:—

"There is a decoction of the head and seeds of the poppy, which they call Coquenar, for the sale of which there are taverns in every quarter of the town, similar to our coffee-houses. It is extremely amusing to visit these houses, and to observe carefully those who resort there for the purpose of drinking it, both before they have taken the dose, before it begins to operate, and while it is operating. On entering the tavern, they are dejected and languishing: soon after they have taken two or three cups of this beverage, they are peevish, and, as it were, enraged; every thing displeases them. They find fault with every thing, and quarrel with one another, but in the course of its operation they make it up again;—and, each one giving himself up to his predominant passion—the lover speaks sweet things to his idol—another, half asleep, laughs in his sleeve—a third talks big and blusters—a fourth tells ridiculous stories. In a word, a person would believe himself to be really in a mad-house. A kind of lethargy and stupidity succeed to this disorderly gaiety; but the Persians, far from treating it as it deserves, call it an ecstacy, and maintain that there is something exquisite and heavenly in this state."—*Chardin.*

that, at last, it becomes nearly essential for bodily comfort and peace of mind. There are many persons who make a practice of swallowing half an ounce of laudanum night and morning, and some will even take from one to two drachms daily of solid opium. The "English Opium-Eater" himself, furnishes the most extraordinary instance on record of the power of habit in bringing the body to withstand this drug. He took daily *eight thousand drops* of laudanum, containing *three hundred and twenty grains* of opium. This enormous quantity he reduced suddenly, and without any considerable effort, to *one thousand drops*, or *forty grains*. "Instantaneously," says he, "and as if by magic, the cloud of profoundest melancholy which rested upon my brain, like some black vapours which I have seen roll away from the summits of the mountains, drew off in one day; passed off with its murky banners, as simultaneously as a ship that has been stranded, and is floated off by the spring-tide."

The circumstance of the body being brought by degrees to withstand a great quantity of opium is not solitary, but exists as a general rule with regard to all stimulants and narcotics. A person who is in the habit of drinking ale, wine, or spirits, will take much more with impunity than one who is not; and the faculty of withstanding these agents goes on strength-

ening till it acquires a certain point, after which it becomes weakened. When this takes place, there is either organic disease or general debility. A confirmed drunkard, whose constitution has suffered from indulgence, cannot take so much liquor, without feeling it, as one who is in the habit of taking his glass, but whose strength is yet unimpaired. It is, I suspect, the same, though probably in a less degree, with regard to opium.

Mithridates, king of Pontus, affords an instance of the effects of habit in enabling the body to withstand poisons; and, on the same principle, we find that physicians and nurses who are much exposed to infection are less liable to take it than those persons whose frames are not similarly fortified.

Opium resembles wine, spirits, and ales, in affecting the brain and disposing to apoplexy. Taken in an over-dose, it is fatal in four or five hours. The person is seized with giddiness, and then falls into a stupor from which it is almost impossible to arouse him. His eyes are closed; his face at first flushed and turgid, afterwards pale and clammy; his pulse slow; his breathing stertorous; and his body convulsed.

I extract the following interesting case of opium-eating from a London paper:

"An inquest was held at Walpole lately, on the body of Rebecca Eason, aged five years, who had been

diseased from her birth, was unable to walk or articulate, and, from her size, did not appear to be more than *five weeks* old. The mother had for many years been in the habit of taking opium in large quantities, (nearly a quarter of an ounce a-day;*) and, it is supposed, had entailed a disease on her child which caused its death; it was reduced to a mere skeleton and had been in that state from birth. Verdict; 'Died by the visitation of God; but from the great quantity of opium taken by the mother during her pregnancy of the said child, and of suckling it, she had greatly injured its health.' It appeared that the mother of the deceased had had five children; that she began to take opium after the birth and weaning of her first child, which was and is remarkably healthy; and that the other children have all lingered and died in the same emaciated state as the child who was the subject of this investigation. The mother is under thirty: she was severely censured by the Coroner for indulging in so pernicious a practice."

V. *Modified by Tobacco.*—A variety of drunkenness is excited by tobacco. This luxury was introduced

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* Equal to nearly three thousand drops of laudanum.

into Europe from the New World, in 1559, by a Spanish gentleman, named Hernandez de Toledo, who brought a small quantity into Spain and Portugal. From thence, by the agency of the French ambassador at Lisbon, it found its way to Paris, where it was used in the form of powder by Catherine de Medicis, the abandoned instigator of the massacre of the Protestants on St. Bartholomew's day. This woman, therefore, may be considered the inventor of snuff, as well as the contriver of that most atrocious transaction. It then came under the patronage of the Cardinal Santa Crocé, the Pope's nuncio, who, returning from his embassy at the Spanish and Portuguese courts, carried the plant to his own country, and thus acquired a fame little inferior to that which, at another period, he had won by piously bringing a portion of the *real* cross from the Holy Land. It was received with general enthusiasm in the Papal states, and hardly less favourably in England, into which it was introduced by Sir Walter Raleigh, in 1585. It was not, however, without opposition that it gained a footing either in this country or in the rest of Europe. Its principal opponents were the priests, the physicians, and the sovereign princes: by the former its use was declared sinful; and in 1624, Pope Urban VIII. published a bull, excommunicating all persons found guilty

of taking snuff when in church. This bull was renewed in 1690 by Pope Innocent; and about twenty-nine years afterwards, the Sultan Amurath IV. made smoking a capital offence, on the ground of its producing infertility. For a long time smoking was forbidden in Russia, under pain of having the nose cut off: and in some parts of Switzerland, it was likewise made a subject of public prosecution—the police regulations of the Canton of Berne, in 1661, placing the prohibition of smoking in the list of the ten commandments, immediately under that against adultery. Nay, that British Solomon, James I. did not think it beneath the royal dignity to take up his pen upon the subject. He accordingly, in 1603, published his famous "Counterblaste to Tobacco," in which the following remarkable passage occurs:—"It is a custom loathesome to the eye, hatefull to the nose, harmfull to the braine, dangerous to the lungs, and, in the black stinking fume thereof, nearest resembling the horrible Stygian smoake of the pit that is bottomless." But notwithstanding this regal and sacerdotal wrath, the plant extended itself far and wide, and is at this moment the most universal luxury in existence.

The effects of tobacco are considerably different from those of any other inebriating agent. Instead of quickening, it lowers the pulse, and, when used to

excess, produces languor, depression of the system, giddiness, confusion of ideas, violent pain in the stomach, vomiting, convulsions, and even death. Its essential oil is so intensely powerful, that two or three drops inserted into a raw wound, would prove almost instantly fatal. But when used in moderation, it has a soothing effect upon the mind, disposing to placid enjoyment, and mellowing every passion into repose. Its effects, therefore, are inebriating; and those who habitually indulge in it may with propriety be denominated drunkards. In whatever form it is used, it produces sickness, stupor, bewilderment, and staggering in those unaccustomed to its use. There is no form in which it can be taken that is not decidedly injurious and disgusting. The whole, from snuffing to plugging, are at once so utterly uncleanly and unnatural, that it is incredible in what manner they ever insinuated themselves into civilized society. A vast quantity of valuable time is wasted by the votaries of tobacco, especially by the smokers; and that the devotees of snuff are not greatly behind in this respect, will be shown by the following singular calculation of Lord Stanhope.

"Every professed, inveterate, and incurable snuff-taker," says his Lordship, "at a moderate computation, takes one pinch in ten minutes. Every pinch,

with the agreeable ceremony of blowing and wiping the nose, and other incidental circumstances, consumes a minute and a half. One minute and a half out of every ten, allowing sixteen hours to a snuff-taking day, amounts to two hours and twenty-four minutes out of every natural day, or one day out of ten. One day out of every ten, amounts to thirty-six days and a half in a year. Hence, if we suppose the practice to be persisted in forty years, two entire years of the snuff-taker's life will be dedicated to tickling his nose, and two more to blowing it. The expense of snuff, snuff-boxes, and handkerchiefs, will be the subject of a second essay, in which it will appear that this luxury encroaches as much on the income of the snuff-taker as it does on his time; and that by proper application of the time and money thus lost to the public, a fund might be constituted for the discharge of the national debt."

But this is not the worst of snuffing, for though a moderate quantity, taken now and then, may do no harm, yet, in the extent to which habitual snuffers carry it, it is positively pernicious. The membrane which lines the nose gets thickened, the olfactory nerves blunted, and the sense of smell consequently impaired. Nor is this all, for, by the strong inspirations which are made when the powder is drawn up,

some of the latter is pretty sure to escape into the stomach. This organ is thence directly subjected to a powerful medicine, which not only acts as a narcotic, but produces heartburn, and every other symptom of indigestion. It is generally believed that Napoleon owed his death to the morbid state of his stomach produced by excessive snuffing. Snuffing has also a strong tendency to give a determination to the head, and on this account plethoric subjects should be the very last ever to enter upon the habit. If it were attended with no other inconvenience, the black loathsome discharge from the nose, and swelling and rubicundity of this organ, with other circumstances equally disagreeable, ought to deter every man from becoming a snuffer.

The smoker, while engaged at *his* occupation, is even a happier man than the snuffer. An air of peculiar satisfaction beams upon his countenance; and as he puffs forth volumes of fragrance, he seems to dwell in an atmosphere of contented happiness. His illusions have not the elevated and magnificent character of those brought on by opium or wine. There is nothing of Raphael or Michael Angelo in their composition —nothing of the Roman or Venetian schools—nothing of Milton's sublimity or Ariosto's dazzling romance; but there is something equally delightful, and, in its

way, equally perfect. His visions stand in the same relation to those of opium or wine, as the Dutch pictures of Ostade to the Italian ones of Paul Veronese —as Washington Irving to Lord Byron—or as Izaak Walton to Froissart. There is an air of delightful homeliness about them. He does not let his imagination run riot in the clouds, but restrains it to the lower sphere of earth, and meditates delightfully in this less elevated region. If his fancy be unusually brilliant, or somewhat heated by previous drinking, he may see thousands of strange forms floating in the tobacco smoke. He may people it, according to his temperament, with agreeable or revolting images—with flowers and gems springing up, as in dreams, before him—or with reptiles, serpents, and the whole host of *diablerie*, skimming, like motes in the sunshine, amid its curling wreaths.

This is all that can be said in favour of smoking, and quite enough to render the habit too common to leave any hope of its suppression, either by the weapons of ridicule, or the more summary plan of the Sultan Amurath. In no sense, except as affording a temporary gratification, can it be justified or defended. It pollutes the breath, blackens the teeth, wastes the saliva which is required for digestion, and injures the complexion. In addition to this, it is apt to produce dispepsia, and

other disorders of the stomach; and, in corpulent subjects, it disposes to apoplexy. At the present moment, smoking is fashionable, and crowds of young men are to be seen at all hours walking the streets with cigars in their mouths, annoying the passengers. They seem to consider it manly to be able to smoke a certain number, without reflecting that there is scarcely an old woman in the country who would not beat them to naught with their own weapons, and that they would gain no sort of honour were they able to outsmoke all the burgomasters of Amsterdam. As the practice, however, seems more resorted to by these young gentlemen for the sake of effect, and of exhibiting a little of the *haut ton*, than for any thing else, it is likely soon to die a natural death among them; particularly as jockeys and porters have lately taken the field in the same way, being determined that no class of the community shall enjoy the exclusive monopoly of street smoking.

The observations made upon the effects of snuffing and smoking, apply in a still stronger degree to chewing. This is the worst way for the health in which tobacco can be used. The waste of saliva is greater than even in smoking, and the derangements of the digestive organs proportionably severe. All confirmed chewers are more than usually subject to dispepsia

and hypochondriasis; and many of them are afflicted with liver complaint, brought on by their imprudent habit.

The most innocent, and, at the same time, most disgusting way of using tobacco, is plugging, which consists in inserting a short roll of the plant in the nostril, and allowing it to remain there so long as the person feels disposed. Fortunately this habit is as rare as it is abominable; and it is to be hoped that it will never become common in Great Britain.

From several of the foregoing circumstances, we are justified in considering tobacco closely allied to intoxicating liquors, and its confirmed votaries as a species of drunkards. At least, it is certain that when used to excess, it gives birth to many of the corporeal and mental manifestations of ebriety.

VI. *Modified by Nitrous Oxide.*—The drunkenness, if it merit that name, from inhaling nitrous oxide, is likewise of a character widely differing from intoxication in general. This gas was discovered by Dr. Priestley, but its peculiar effects upon the human body were first perceived in 1799, by Sir Humphry Davy, who, in the following year, published a very elaborate account of its nature and properties, interspersed with details by some of the most eminent literary and

scientific characters, of the sensations they experienced on receiving it into their lungs.

According to these statements, on breathing the gas the pulse is accelerated, and a feeling of heat and expansion pervades the chest. The most vivid and highly pleasurable ideas pass, at the same time, through the mind; and the imagination is exalted to a pitch of entrancing ecstacy. The hearing is rendered more acute, the face is flushed, and the body seems so light that the person conceives himself capable of rising up and mounting into the air. Some assume theatrical attitudes; others laugh immoderately, and stamp upon the ground. There is an universal increase of muscular power, attended with the most exquisite delight. In a few cases there are melancholy, giddiness, and indistinct vision; but generally the feelings are those of perfect pleasure. After these strange effects have ceased, no debility ensues, like that which commonly follows high excitement. On the contrary, the mind is strong and collected, and the body unusually vigorous for some hours after the operation.

At the time of the discovery of the effects of nitrous oxide, strong hopes were excited that it might prove useful in various diseases. These, unfortunately, have not been realised. Even the alleged properties of the gas have now fallen into some discredit. That it has

produced remarkable effects, cannot be denied, but there is much reason for thinking that, in many cases, these were principally brought about by the influence of imagination. Philosophers seem to be divided on this point, and their conflicting testimonies I do not pretend to reconcile. My own opinion is, that there must be some truth in its reported attributes; but that by the power of fancy these attributes have been grossly, though unintentionally exaggerated. If the statements first published concerning it be true, the intoxication it produces is entirely one *sui generis*, and differs so much from that produced by other agents, that it can hardly be looked upon as the same thing.

The above remarks appeared in the first edition of this work, and since writing them, I have tried the experiment of inhaling nitrous oxide. The principal effects it produced were giddiness and violent beating in the head, such as occur in the acme of drunkenness. There was also a strong propensity to laugh: it occurs to me, however, that the risible tendency might be controlled by a strong effort of volition, in the same way as in most cases of drunkenness, were the effort imperatively requisite. Altogether I experienced nearly the sensations of highly excited ebriety. There was the same seeming lightness and expansion of the head, the

same mirthfulness of spirit, and the same inordinate propensity to do foolish things, knowing them to be foolish, as occur in drunkenness in general. I was perfectly aware what I was about, and could, I am persuaded, with some effort, have subjected the whimsies of fancy to the soberer dictates of judgment. In a word, the gas produced precisely a temporary paroxysm of drunkenness, and such a determination of blood upwards as rendered the complexion livid, and left behind some degree of headach. It would be worth while trying whether similar effects would not follow the inhalation of oxygen gas. This is all I can say on the subject from personal experience. Those who wish to know more, should read Sir H. Davy's work, but, above all, they should try the gas upon themselves. In the meantime I shall lay before the reader the details, in their own words, of the sensations experienced by Messrs. Edgeworth and Coleridge.

Mr. Edgeworth's Case.—"My first sensation was an universal and considerable tremor. I then perceived some giddiness in my head, and a violent dizziness in my sight; these sensations by degrees subsided, and I felt a great propensity to bite through the wooden mouth-piece, or the tube of the bag through which I inspired the air. After I had breathed

all the air that was in the bag, I eagerly wished for more. I then felt a strong propensity to laugh, and did burst into a violent fit of laughter, and capered about the room without having the power of restraining myself. By degrees, these feelings subsided, except the tremor, which lasted for an hour after I had breathed the air, and I felt a weakness in my knees. The principal feeling through the whole of the time, or what I should call the characteristical part of the effect, was a total difficulty of restraining my feelings, both corporeal and mental, or, in other words, not having any command of myself."

Mr. Coleridge's Case.—" The first time I inspired the nitrous oxide, I felt an highly pleasurable sensation of warmth over my whole frame, resembling that which I once remember to have experienced after returning from a walk in the snow into a warm room. The only motion which I felt inclined to make, was that of laughing at those who were looking at me. My eyes felt distended, and, towards the last, my heart beat as if it were leaping up and down. On removing the mouth-piece, the whole sensation went off almost instantly.

" The second time, I felt the same pleasurable sensation of warmth, but not, I think, in quite so great a

degree. I wished to know what effect it would have on my impressions; I fixed my eye on some trees in the distance, but I did not find any other effect, except that they became dimmer and dimmer, and looked at last as if I had seen them through tears. My heart beat more violently than the first time. This was after a hearty dinner.

" The third time, I was more violently acted on than in the two former. Towards the last, I could not avoid, nor indeed felt any wish to avoid, beating the ground with my feet; and, after the mouth-piece was removed, I remained for a few seconds motionless, in great ecstacy.

" The fourth time was immediately after breakfast. The first few inspirations affected me so little, that I thought Mr. Davy had given me atmospheric air; but soon felt the warmth beginning about my chest, and spreading upward and downward, so that I could feel its progress over my whole frame. My heart did not beat so violently; my sensations were highly pleasurable, not so intense or apparently local, but of more unmingled pleasure than I had ever before experienced." *

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* The doses in these experiments were from five to seven quarts.

CHAPTER VI.

DIFFERENCES IN THE ACTION OF OPIUM AND ALCOHOL.

THE *modus operandi* of opium upon the body is considerably different from that of alcohol. The latter intoxicates chiefly by acting *directly* upon the nerves, the former by acting *secondarily* upon them, through the medium of absorption. This is easily proved by injecting a quantity of each into the cellular tissue of any animal, and comparing the effects with those produced when either is received into the stomach. M. Orfila * details some interesting experiments which he made upon dogs. In applying the watery extract of opium to

* Toxicologie Générale.

them in the first manner, (by injection into the cellular tissue,) immediate stupor, convulsions, and debility ensued, and proved fatal in an hour or two. When, on the contrary, even a larger quantity was introduced into the stomach of the animal, it survived ten, twelve, or eighteen hours, although the œsophagus was purposely tied to prevent vomiting. The operation of alcohol was the reverse of this; for, when injected into the cellular substance, the effects were slight; but when carried into the stomach, they were powerful and almost instantaneous. This proves that opium acts chiefly by being taken up by the absorbents, as this is done much more rapidly by the drug being directly applied to a raw surface than in the stomach, where the various secretions and processes of digestion retard its absorption. Besides, alcohol taken in quantity produces instant stupefaction. It is no sooner swallowed than the person drops down insensible. Here is no time for absorption: the whole energies of the spirit are exerted against the nervous system. The same rapid privation of power never occurs after swallowing opium. There is always an interval, and generally one of some extent, between the swallowing and the stupor which succeeds. Another proof that opium acts in this manner, is the circumstance of its being much more speedily fatal than alcohol, when injected into

the blood-vessels. Three or four grains in solution, forced into the carotid artery of a dog, will kill him in a few minutes. Alcohol, used in the same manner, would not bring on death for several hours.

In addition, it may be stated that a species of drunkenness is produced by inhaling the gas of intoxicating liquors. Those employed in bottling spirits from the cask, feel it frequently with great severity. This proves that there is a close sympathy between the nerves of the nose and lungs, and those of the stomach. From all these circumstances it is pretty evident that intoxication from spirits is produced more by the direct action of the fluid upon the nerves of the latter organ, than by absorption.

Mr. Brodie supposes that there is no absorption whatever of alcohol, and supports his views with a number of striking facts.* This, however, is a length

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* The following are the grounds on which he supports his doctrine. "1. In experiments where animals have been killed by the injection of spirits into the stomach, I have found this organ to bear the marks of great inflammation, but never any preternatural appearances whatever in the brain. 2. The effects of spirits taken into the stomach, in the last experiment, were so instantaneous, that it appears impossible that absorption should have taken place before they were produced. 3. A person who

to which I cannot go. I am inclined to think that though such absorption is not necessary to produce drunkenness, it generally takes place to a greater or lesser degree; nor can I conceive any reason why alcohol may not be taken into the circulation as well as any other fluid. My reasons for supposing that it is absorbed, are the following. 1. The blood, breath, and perspiration of a confirmed drunkard differ from those of a sober man; the former being darker, and the two latter strongly impregnated with a spirituous odour. 2. The perspiration of the wine-drinker is often of the hue of his favourite liquor: after a debauch on Port, Burgundy, or Claret, it is not uncommon to see the shirt or sheets in which he lies, tinted to a rosy colour by the moisture which exudes from his body. 3. Madder, mercury, and sulphur are received into the

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is intoxicated frequently becomes suddenly sober after vomiting. 4. In the experiments which I have just related, I mixed tincture of rhubarb with the spirits, knowing from the experiments of Mr. Home and Mr. William Brande, that this (*rhubarb*) when absorbed into the circulation, was readily separated from the blood by the kidneys, and that very small quantities might be detected in the urine by the addition of potash; but though I never failed to find urine in the bladder, I never detected rhubarb in it.—*Phil. Trans. of the Roy. Soc. of Lond.* 1811, *Part* I. p. 178.

circulation unchanged; the former dyeing the bones, and the others exhaling through the pores of the skin, so as to communicate their peculiar odours to the person, and even discolour coins and other metallic substances in his pockets. The first of these reasons is a direct proof of absorption: the second shows that as wine is received into the circulation, and passes through it, alcohol may do the same; and the third furnishes collateral evidence of other agents exhibiting this phenomenon as well as spirituous liquors. The doctrine of absorption is supported by Dr. Trotter,* who conceives that alcohol de-oxygenizes the blood, and causes it to give out an unusual portion of hydrogen gas. The quantity of this gas in the bodies of drunkards is so great, that many have attempted to explain from it the circumstance of *Spontaneous Combustion*, by which, it is alleged, the human frame has been sometimes destroyed, by being burned to ashes.

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* Essay on Drunkenness.

CHAPTER VII.

PHYSIOLOGY OF DRUNKENNESS.

In administering medicines, the practitioner has a natural desire to learn the means by which they produce their effects upon the body. Thus, he is not contented with knowing that squill acts as a diuretic, and that mercury increases the secretion of the bile. He inquires by what process they do so; and understands that the first excites into increased action the secretory arteries of the kidneys, and the last the secretory veins of the liver. In like manner, he does not rest satisfied with the trite knowledge that wines, and spirits, and ales, produce intoxication: he extends his researches beyond this point, and is naturally anxious to ascertain by what peculiar action of the

system these agents give rise to so extraordinary an effect.

All the agents of which we have spoken, with the exception of tobacco, whose action from the first is decidedly sedative, operate partly by stimulating the frame. They cause the heart to throb more vigorously, and the blood to circulate freer, while, at the same time, they exert a peculiar action upon the nervous system. The nature of this action, it is probable, will never be satisfactorily explained. If mere stimulation were all that was wanted, drunkenness ought to be present in many cases where it is never met with. It, or more properly speaking, its symptoms, ought to exist in inflammatory fever, and after violent exercise, such as running or hard walking. Inebriating agents, therefore, with few exceptions, have a twofold action. They both act by increasing the circulation, and by influencing the nerves; and the latter operation, there can be no doubt, is the more important of the two. Having stated this general fact, it will be better to consider the cause of each individual symptom in detail.

I. *Vertigo.*—This is partly produced by the ocular delusions under which the drunkard labours, but it is principally owing to other causes; as it is actually greater when the eyes are shut than when they are

open—these causes, by the exclusion of light, being unaccountably increased. Vertigo, from intoxication, is far less liable to produce sickness and vomiting than from any other cause; and when it does produce them, it is to a very inconsiderable degree. These symptoms, in ninety-nine cases out of a hundred, arise from the disordered state of the stomach, and not, as we have elsewhere mentioned, from the accompanying giddiness. There are, indeed, a certain class of subjects who vomit and become pale, as soon as vertigo comes over them, but such are few in number compared with those whose stomachs are totally unaffected by this sensation. In swinging, smoking, sailing at sea, or turning rapidly round, sickness and vomiting are apt to occur; and there seems no doubt that they proceed in a great measure from the vertigo brought on by these actions. The giddiness of drunkenness, therefore, as it very rarely sickens, must be presumed to have some characters peculiar to itself. In this, as well as in some other affections, it seems to be the consequence of a close sympathy between the brain and nerves of the stomach; and whatever affects the latter organ, or any other viscus strongly sympathizing with it, may bring it on equally with inebriating agents: calculi in the ureters or biliary ducts are illustrations of this fact. In intoxication, the giddiness is more

strongly marked, because the powers both of body and mind are temporarily impaired, and the sensorium so disordered as to be unable to regulate the conduct.

A degree of vertigo may be produced by loading the stomach too rapidly and copiously after a long fast. Common food in this instance amounts to a strong stimulus in consequence of the state of the stomach, in which there was an unnatural want of excitement. This organ was in a state of torpor; and a stimulus which, in ordinary circumstances, would hardly have been felt, proves, in reality, highly exciting. For the same reason, objects have an unnatural luminousness when a person is suddenly brought from intense darkness to a brilliant light.

II. *Double Vision.*—The double vision, which occurs in drunkenness, may be readily accounted for by the influence of increased circulation in the brain upon the nerves of sight. In phrenzy, and various fevers, the same phenomenon occurs. Every nerve is supplied with vessels; and it is conceivable that any unusual impulse of blood into the optics may so far affect that pair as to derange their actions. Whence, they convey false impressions to the brain, which is itself too much thrown off its just equilibrium to remedy, even if that under any circumstances were possible, the distorted

images of the retina. The refraction of light in the tears, which are secreted more copiously than usual during intoxication, may also assist in multiplying objects to the eye.

III. *Staggering and Stammering.*—These symptoms are, in like manner, to be explained from the disordered state of the brain and nervous system. When the origin of sensation is affected, it is impossible that parts whose actions depend upon it can perform their functions well. The nervous fluid is probably carried to the muscles in a broken and irregular current, and the filaments which are scattered over the body are themselves directly stunned and paralyzed: hence, the insensibility to pain, and other external impressions. This insensibility extends everywhere, even to the organs of deglutition and speech. The utterance is thick and indistinct, indicating a loss of power in the lingual nerves which give action to the tongue; and the same want of energy seems to prevail in the gustatory branches which give it taste.

IV. *Heat and Flushing.*—These result from the strong determination of blood to the surface of the body. This reddens and tumifies the face and eyes, and excites an universal glow of heat. Blood is the

cause of animal heat, and the more it is determined to any part, the greater is the quantity of caloric evolved therefrom.

V. *Ringing in the Ears.*—This is accounted for by the generally increased action within the head, and more particularly by the throbbing of the internal carotid arteries which run in the immediate neighbourhood of the ears.

VI. *Elevation of Spirits.*—The mental pleasure of intoxication is not easily explained on physiological principles. We feel a delight in being rocked gently, in swinging on a chair, or in being tickled. These undoubtedly act upon the nerves, but in what manner, it would be idle to attempt investigating. Intoxicating agents no doubt do the same thing. The mental manifestations produced by their influence depend almost entirely upon the nerves, and are, unlike the corporeal ones, in a great measure independent of vascular excitement. The power of exciting the feelings inherent in these principles, can only be accounted for by supposing a most intimate relation to subsist between the body and the mind. The brain, through the medium of its nervous branches, is the source of all this excitement. These branches receive

the impressions and convey them to their fountain-head, whence they are showered like sparkling raindrops over the mind, in a thousand fantastic varieties. No bodily affection ever influences the mind but through the remote or proximate agency of this organ. It sits enthroned in the citadel of thought, and, though material itself, acts with wizard power both upon matter and spirit. No other texture has the same pervading principle. If the lungs be diseased, we have expectoration and cough; if the liver, jaundice or dropsy; if the stomach, indigestion; but when the brain is affected, we have not merely many bodily symptoms, but severe affections of the mind; nor are such affections ever produced by any organ but through the agency of the brain.* It, therefore, acts in a double capacity upon the frame, being both the source of the corporeal feelings, and of the mental manifestations. Admitting this truth, there can be

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* This fact, the phrenologists, with their usual ingenuity, have laid hold of; and it is but fair to confess, that the groundwork of their creed, which makes the brain the source of the mind, cannot well be got over by their opponents. If the mental powers depend in no degree upon physical structure, how does it happen that any thing which affects the brain affects the mind also?

little difficulty in apprehending why intoxication produces so powerful a mental influence. This must proceed from a resistless impulse being given to the brain, by virtue of the peculiar action of inebriating agents upon the nerves. That organ of the mind is suddenly endowed with increased energy. Not only does the blood circulate through it more rapidly, but an action, *sui generis*, is given to its whole substance. Mere increase of circulation, as we have already stated, is not sufficient: there must be some other principle at work upon its texture; and it is this principle, whatever it may be, which is the main cause of drunkenness. At first, ebriety has a soothing effect, and falls over the spirit like the hum of bees, or the distant murmur of a cascade. Then to these soft dreams of Elysium succeed a state of maddening energy and excitement in the brain. The thoughts which emanate from its prolific tabernacle, are more fervid and original than ever—they rush out with augmented copiousness, and sparkle over the understanding like the aurora borealis, or the eccentric scintillations of light upon a summer cloud. In a word, the organ is excited to a high, but not a diseased action, for this is coupled with pain, and, instead of pleasurable, produces afflicting ideas. But its energies, like those of any other part, are apt to be over-excited. When this

takes place, the balance is broken; the mind gets tumultuous and disordered, and the ideas inconsistent, wavering, and absurd. Then come the torpor and exhaustion subsequent on such excessive stimulus. The person falls into drowsiness or stupor, and his mind, as well as his body, is followed by languor corresponding to the previous excitation.

Such is a slight and unsatisfactory attempt to elucidate some of the more prominent phenomena of drunkenness. Some are omitted as being too obvious to require explanation, and others have been elsewhere cursorily accounted for in different parts of the work.

CHAPTER VIII.

METHOD OF CURING THE FIT OF DRUNKENNESS.

I. *From Liquors.*—Generally speaking, there is no remedy for drunkenness equal to vomiting. The sooner the stomach is emptied of its contents the better, and this may, in most cases, be accomplished by drinking freely of tepid water, and tickling the fauces. On more obstinate occasions, powerful emetics will be necessary, and if even these fail, and dangerous symptoms supervene, the stomach pump, lately invented by Jukes, should be immediately employed. Cold applications to the head are likewise useful. In all cases, the head ought to be well elevated, and the neck-cloth removed, that there may be no impediment to the circulation. Where there is total insen-

sibility, where the pulse is slow and full, the pupils dilated, the face flushed, and the breathing stertorous, it becomes a question whether blooding might be useful. Darwin * and Trotter speak discouragingly of the practice. As a general rule I think it is bad; and that many persons who would have recovered, if left to themselves, have lost their lives by being prematurely bled. In all cases it should be done cautiously, and not for a considerable time. Vomiting and other means should invariably be first had recourse to, and if they fail, and nature is unable of her own power to overcome the stupor, blooding may be tried. In this respect, liquors differ from opium, the insensibility from which is benefited by abstraction of blood.

There is one variety of drunkenness in which both blooding and cold are inadmissible. This is when a person is struck down, as it were, by drinking suddenly a great quantity of ardent spirits. Here he is overcome by an instantaneous stupor: his countenance is ghastly and pale, his pulse feeble, and his body cold. While these symptoms continue, there is no remedy but vomiting. When, however, they wear off, and are

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* Zoonomia.

succeeded, as they usually are, by flushing, heat, and general excitement, the case is changed, and must be treated as any other where such symptoms exist.

We have already mentioned that the excitement of drunkenness is succeeded by universal languor. In the first stage, the drunkard is full of energy, and capable of withstanding vigorously all external influences. In the second, there is general torpor and exhaustion, and he is more than usually subject to every impression, whether of cold or contagion. Persons are often picked up half dead in this second stage. The stimulus of intoxication had enabled them to endure the chill of the atmosphere, but the succeeding weakness left them more susceptible than before of its severity. In this state the body will not sustain any farther abstraction of stimuli; and blooding and cold would be highly injurious. Vomiting is here equally necessary, as in all other instances; but the person must be kept in a warm temperature, and cherished with light and nourishing food—with soups, if such can be procured, and even with negus, should the prostration of strength be very great.

There is nothing which has so strong a tendency to dispel the effects of a debauch as hard exercise, especially if the air be cold. Aperients and diaphoretics are also extremely useful for the same purpose.

For some days after drinking too much, the food ought to be light and unirritating, consisting principally of vegetables. Animal food is apt to heat the body, and dispose it to inflammatory complaints.

It may here be mentioned, though not with a view of recommending the practice, that the vegetable acids have a strong effect both in counteracting and removing drunkenness. To illustrate this fact, the following circumstance may be mentioned. About twenty years ago, an English regiment was stationed in Glasgow, the men of which, as is common in all regiments, became enamoured of whisky. This liquor, to which they gave the whimsical denomination of *white ale,* was new to them—being nearly unknown in England: and they soon indulged in it to such an extent, as to attract the censure of their officers. Being obliged to be at quarters by a certain hour, they found out the plan of sobering themselves by drinking large quantities of vinegar, perhaps a gill or two at a draught. This, except in very bad cases, had the desired effect, and enabled them to enter the barrack-court, or appear on parade, in a state of tolerable sobriety. The power of the vegetable acids in resisting intoxication is well shown in the case of cold punch—a larger portion of which can be withstood than of either grog or

toddy, even when the quantity of spirit is precisely the same.*

II. *From Opium.*—When a dangerous quantity of opium has been taken, the treatment, in the first instance, is the same as with regard to spirits, or any other intoxicating fluid. Immediate vomiting is to be attempted, and for this purpose it will be necessary to give ten grains of sulphate of copper, half a drachm of sulphate of zinc, or five grains of tartar emetic. Either of these should be dissolved in a small quantity of

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* In speaking of the treatment, it is necessary to guard against confounding other affections with drunkenness:—"There is a species of delirium that often attends the accession of *typhus fever*, from contagion, that I have known to be mistaken for ebriety. Among seamen and soldiers, whose habits of intoxication are common, it will sometimes require nice discernment to decide; for the vacant stare in the countenance, the look of idiotism, incoherent speech, faultering voice, and tottering walk, are so alike in both cases, that the naval and military surgeon ought at all times to be very cautious how he gives up a man to punishment, under these suspicious appearances. Nay, the circumstance of his having come from a tavern, with even the effluvium of liquor about him, are signs not always to be trusted; for these haunts of seamen and soldiers are often the sources of infection."—*Trotter.*

tepid water, and instantly swallowed. When vomiting has taken place, it should be encouraged by warm drinks, till there is reason to believe that the stomach has been freed of the poison. Large quantities of a strong infusion of coffee ought then to be given, or the vegetable acids, such as vinegar or lemon-juice, mixed with water. These serve to mitigate the bad consequences which often follow, even after the opium has been brought completely up. If the person show signs of apoplexy, more especially if he be of a plethoric habit, the jugular vein, or temporal artery should be opened, and a considerable quantity of blood taken away. Every means must be used to arouse him from stupor. He must be moved about, if possible, from room to room, hartshorn applied to his nostrils, and all plans adopted to prevent him from sinking into lethargy. For this purpose, camphor, asafœtida, or musk, might be administered with advantage. In cases where vomiting cannot be brought about by the ordinary means, M. Orfila suggests that one or two grains of tartar emetic, dissolved in an ounce or two of water, might be injected into the veins. In desperate cases, Jukes's pump may be tried. Purgatives are latterly necessary.

Many practitioners consider vinegar and the other vegetable acids antidotes to opium. This opinion M.

Orfila has most satisfactorily shown to be erroneous. In a series of well-conducted and conclusive experiments made by him, it appears that the vegetable acids aggravate the symptoms of poisoning by opium, whenever they are not vomited. They hurry them on more rapidly, render them more violent, produce death at an earlier period, and give rise to inflammation of the stomach—an event which hardly ever occurs when they are not employed. These effects, it would appear, are partly produced by their power of dissolving opium, which they do better than the mere unassisted fluids of the stomach; consequently the absorption is more energetic. The only time when acids can be of use, is after the person has brought up the poison by vomiting. They then mitigate the subsequent symptoms, and promote recovery; but if they be swallowed before vomiting takes place, and if this act cannot by any means be brought about, they aggravate the disorder, and death ensues more rapidly than if they had not been taken.

Coffee has likewise a good effect when taken after the opium is got off the stomach; but it differs from the acids in this, that it does not, under any circumstances, increase the danger. While the opium is still unremoved, the coffee may be considered merely inert; and it is, therefore, a matter of indifference whether

at this time it be taken or not. Afterwards, however, it produces the same beneficial effects as lemonade, tartaric acid, or vinegar.

III. *From Tobacco.*—If a person feel giddy or languid from the use of this luxury, he should lay himself down on his back, exposed to a current of cool air. Should this fail of reviving him, let him either swallow twenty or thirty drops of hartshorn, mixed with a glass of cold water, or an ounce of vinegar moderately diluted. Where tobacco has been received into the stomach, so as to produce dangerous symptoms, a powerful emetic must immediately be given, and vomiting encouraged by copious drinks, till the poison is brought up. After this, vinegar ought to be freely exhibited, and lethargy prevented by the external and internal use of stimuli. If apoplectic symptoms appear, blooding must be had recourse to. The same rule applies here, with regard to acids, as in the case of opium. They should never be given till the stomach is thoroughly liberated of its contents by previous vomiting.

Accidents happen oftener with tobacco than is commonly supposed. Severe languor, retching, and convulsive attacks sometimes ensue from the application of ointment, made with this plant, for the cure of

ring-worm; and Santeuil, the celebrated French poet, lost his life in consequence of having unknowingly drunk a glass of wine, into which had been put some Spanish snuff.

IV. *From Nitrous Oxide.*—Though the inhalation of this gas is seldom attended with any risk, yet in very plethoric habits, there might be a determination of blood to the head, sufficient to produce apoplexy. If a person, therefore, becomes, after the experiment, convulsed, stupified, and livid in the countenance, and if these symptoms do not soon wear away, some means must be adopted for their removal. In general, a free exposure to fresh air, and dashing cold water over the face will be quite sufficient, but if the affection is so obstinate as to resist this plan, it will then be necessary to draw some blood from the arm, or, what is still better, from the jugular vein. When, in delicate subjects, hysteria and other nervous symptoms are produced, blooding is not necessary; all that is requisite to be done being the application of cold water to the brow or temples, and of hartshorn to the nostrils. In obstinate cases, twenty or thirty drops of the latter in a glass of water, may be administered with advantage.

CHAPTER IX.

PATHOLOGY OF DRUNKENNESS.

THE evil consequences of drinking, both in a physical and moral point of view, seem to have been known from the most remote antiquity. They are expressly mentioned in Scripture; nor can there be a doubt that the Homeric fiction of the companions of Ulysses being turned into swine by the enchanted cup of Circe, plainly implied the bestial degradation into which men bring themselves by coming under the dominion of so detestable a habit. Having mentioned these circumstances in favour of the accuracy of ancient knowledge, we shall simply proceed to detail the effects of drunkenness, so far as the medical practitioner is professionally interested in knowing them.

The moral consequences belong more properly to the legislator and divine, and do not require to be here considered.

I. *State of the Liver.*—One of the most common consequences of drunkenness is acute inflammation. This may affect any organ, but its attacks are principally confined to the brain, the stomach, and the liver. It is unnecessary to enter into any detail of its nature and treatment. These are precisely the same as when it proceeds from any other cause. The inflammation of drunkenness is, in a great majority of cases, chronic; and the viscus which, in nine cases out of ten, suffers is the liver.

Liquors, from the earliest ages, have been known to affect this organ. Probably the story of Prometheus stealing fire from heaven and animating clay, alluded to the effects of wine upon the human body; and the punishment of having his liver devoured by a vulture, may be supposed to refer to the consequences which men draw upon themselves by over-indulgence—this organ becoming thereby highly diseased. Man is not the only animal so affected. Swine which are fed on the refuse of breweries, have their livers enlarged in the same manner. Their other viscera become also indurated, and their flesh so tough, that, unless killed

early, they are unfit to be eaten. Some fowl-dealers in London are said to mix gin with the food of the birds, by which means they are fattened, and their livers swelled to a great size. The French manage to enlarge this organ in geese, by piercing it shortly after the creatures are fledged.

This is a viscus which, in confirmed topers, never escapes; and it withstands disease better than any other vital part, except, perhaps, the spleen. Sometimes, by a slow chronic action, it is enlarged to double its usual size, and totally disorganized, and yet the person suffers comparatively little. The disease frequently arises, in tropical climates, from warmth and other natural causes, but an excess in spirituous liquors is more frequently the cause than is generally imagined.

The consequences which follow chronic imflammation of the liver, are very extensive. The bile, in general, is not secreted in due quantity or quality, consequently digestion is defective. The bowels, from want of their usual stimulus, become torpid. The person gets jaundiced, his skin becoming yellow, dry, and rough, and the white of his eyes discoloured. As the enlargement goes on, the free passage of blood in the veins is impeded, and their extremities throw out lymph: this accumulating, forms dropsy, a disease

with which a great proportion of drunkards are ultimately more or less affected.

The jaundice of drunkenness is not an original disease, but merely a symptom of the one under consideration. A very slight cause will often bring it on; it is, consequently, not always dangerous. Dropsy is, for the most part, also symptomatic of diseased liver, but sometimes, more especially in dram-drinkers, it arises from general debility of the system. In the former case, effusion always takes place in the cavity of the abdomen. In the latter, there is general anasarca throughout the body, usually coupled with more or less topical affection. In every instance, dropsy, whether general or local, is a very dangerous disease.

II. *State of the Stomach, &c.*—Like the liver, the stomach is more subject to chronic than acute inflammation. It is also apt to get indurated, from long continued, slow action going on within its substance. This disease is extremely insidious, frequently proceeding great lengths before it is discovered. The organ is often thickened to half an inch, or even an inch; and its different tunics so matted together that they cannot be separated. The pyloric orifice becomes, in many cases, contracted. The cardiac may suffer the same disorgan-

ization, and so may the œsophagus; but these are less common, and, it must be admitted, more rapidly fatal. When the stomach is much thickened, it may sometimes be felt like a hard ball below the left ribs. At this point there is also a dull uneasy pain, which is augmented upon pressure.

Indigestion or spasm may arise from a mere imperfect action of this organ, without any disease of its structure; but when organic derangement takes place, they are constant attendants. In the latter case it is extremely difficult for any food to remain on the stomach; it is speedily vomited. What little is retained undergoes a painful fermentation, which produces sickness and heartburn. There is, at the same time, much obstinacy in the bowels, and the body becomes emaciated.

This disease, though generally produced by dissipation, originates sometimes from other causes, and affects the soberest people. Whenever the stomach is neglected, when acidity is allowed to become habitual, or indigestible food too much made use of, the foundation may be laid for slow inflammation, terminating in schirrus and all its bad consequences.

Vomiting of bilious matter in the mornings, is a very common circumstance among all classes of drunkards. But there is another kind of vomiting much

more dangerous, and that is when inflammation of the villous coat of the stomach takes place. In such a state there is not much acute pain, but rather a dull feeling of uneasiness over the abdomen, attended with the throwing up of a dark, crude matter, resembling coffee grounds. I have seen two cases in which the vomiting stopped suddenly, in consequence of metastasis to the head. In these, the affection soon proved fatal, the persons being seized with indistinctness of vision, low delirium, and general want of muscular power: the action of the kidneys was also totally suspended for three days before death. On examination, *post mortem*, there was effusion in the ventricles of the brain, besides extensive inflammation along the inner surface of the upper portion of the alimentary canal.

There is nothing more indicative of health, than a good appetite for breakfast; but confirmed topers, from the depraved state of their stomachs, lose all relish for this meal.

Persons of this description are generally of a costive habit of body, but a debauch with those who are constitutionally sober, is, for the most part, followed by more or less diarrhœa.

In the latter stages of a drunkard's life, though he has still the relish for liquor as strongly as ever, he no

longer enjoys his former power of withstanding it. This proceeds from general weakness of the system, and more particularly of the stomach. This organ gets debilitated, and soon gives way, while the person is intoxicated much easier, and often vomits what he had swallowed. His appetite likewise fails; and to restore it, he has recourse to various bitters, which only aggravate the matter, especially as they are in most cases taken under the medium of ardent spirits. Bitters are often dangerous remedies. When used moderately, and in cases of weak digestion from natural causes, they frequently produce the best effects; but a long continuance of them is invariably injurious. There is a narcotic principle residing in most bitters, which physicians have too much overlooked. It destroys the sensibility of the stomach, determines to the head, and predisposes to apoplexy and palsy. This was the effect of the famous Portland Powder, * so celebrated many years ago for the cure of gout; and

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* The Portland Powder consisted of equal parts of the roots of round birthwort and gentian, of the leaves of germander and ground pine, and of the tops of the lesser centaury, all dried. Drs. Cullen, Darwin, and Murray of Gottingen, with many other eminent physicians, bear testimony to the pernicious effects of this compound.

similar consequences will, in the long-run, follow bitters as they are commonly administered. Persons addicted to intemperance, have an inordinate liking for these substances; let them be ever so nauseous, they are swallowed greedily, especially if dissolved in spirits. Their fondness for purl, herb-ale, and other pernicious morning drinks, is equally striking.

There is nothing more characteristic of a tippler than an indifference to tea, and beverages of a like nature. When a woman exhibits this quality, we may reasonably suspect her of indulging in liquor. If drunkards partake of tea, they usually saturate it largely with ardent spirits. The unadulterated fluid is too weak a stimulus for their unnatural appetites.

III. *State of the Brain.*—Inflammation of this organ is often a consequence of intemperance. It may follow immediately after a debauch, or it may arise secondarily from an excess of irritation being applied to the body, during the stage of debility. Even an abstraction of stimulus, as by applying too much cold to the head, may bring it on in this latter state.

Dr. Armstrong, in his lectures, speaks of a chronic inflammation of the brain and its membranes, proceeding, among other causes, from the free use of strong wines and liquors. According to him, it is much more

common after, than before, forty years of age, although he has seen several instances occurring in young persons. The brain gets diseased, the diameter of the vessels being diminished, while their coats are thickened and less transparent than usual. In some places they swell out and assume a varicose appearance. The organ itself has no longer the same delicate and elastic texture, becoming either unnaturally hard, or of a morbid softness. Slight effusions in the various cavities are apt to take place. Under these circumstances, there is a strong risk of apoplexy. To this structure is to be ascribed the mental debasement, the loss of memory, and gradual extinction of the intellectual powers. I believe that the brains of all confirmed drunkards exhibit more or less of the above appearances.

IV. *State of the Blood and Breath.*—The blood of a professed drunkard, as already stated, differs from that of a sober man. It is more dark, and approaches to the character of venous. The ruddy tint of those carbuncles which are apt to form upon the face is no proof to the contrary, as the blood which supplies them is crimsoned by exposure to the air, on the same principle as that by which the blood in the pulmonary arteries receives purification by the process of breathing.

The blood of a malt liquor drinker is not merely darker, but also more thick and sizy than in other cases, owing, no doubt, to the very nutritious nature of his habitual beverage.

The breath of a drunkard has always a spirituous odour. This is partly owing to the state of the stomach, which communicates the flavour of its customary contents to respiration; and partly also, there can be little doubt, to the absorption of the liquor by the blood, through the medium of the lacteals.

V. *State of the Perspiration.*—The perspiration of a confirmed drunkard, has often a strong spirituous odour. I have met with two instances, the one in a Claret, the other in a Port drinker, in which the moisture which exuded from their bodies had a ruddy complexion, similar to that of the wine on which they had committed their debauch.

VI. *State of the Eyes, &c.*—The eyes may be affected with acute or chronic inflammation. Almost all drunkards have the latter more or less. Their eyes are red and watery, and have an expression so peculiar, that the cause can never be mistaken. This, and a certain want of firmness about the lips, which are loose, gross, and sensual, betray at once the toper.

Drunkenness impairs vision. The delicacy of the retina is probably affected; and it is evident, that, from long continued inflammation, the tunica adnata which covers the cornea must lose its original clearness and transparency.

Pleurisy often arises in drunkards from their remaining out in the open air, exposed to cold and damp. Inflammation of the intestines, of the kidneys, of the bladder, &c. is also liable to occur, both from general excitement, and particular irritation of these organs. Rheumatism is often traced to the neglect and exposure of a fit of drunkenness.

Most drunkards have a constant tenderness and redness of the nostrils. This, I conceive, arises from the state of the stomach and œsophagus. The same membrane which lines them is prolonged upwards to the nose and mouth, and carries thus far its irritability.

There is no organ which so rapidly betrays the Bacchanalian propensities of its owner as the nose. It not only becomes red and fiery, like that of Bardolph,*

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* "*Falstaff.* Thou art our admiral: thou bearest the lanthorn in the poop; but 'tis in the *nose* of thee: thou art the knight of the burning lamp.

"*Bardolph.* Why, Sir John, my face does you no harm.

"*Falstaff.* No, I'll be sworn! I make as good use of it as

but acquires a general increase of size—displaying upon its surface various small pimples, either wholly of a deep crimson hue, or tipped with yellow, in consequence of an accumulation of viscid matter within them. The rest of the face often presents the same carbuncled appearances.

VII. *Gout.*—Gout is the offspring of gluttony, drunkenness, or sensuality, or of them all put together. It occurs most frequently with the wine-bibber. A very slight cause may bring it on when hereditary predisposition exists; but in other circumstances considerable excess will be required before it makes its appearance. It is one of the most afflicting consequences of intemperance, and seems to have been

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many a man doth of a death's head or a *memento mori*. I never see thy face but I think of hell-fire."——"When thou rann'st up Gads-hill in the night to catch my horse, if I did not think thou hadst been an *ignis fatuus*, or a ball of wildfire, there's no purchase in money. O! thou art a perpetual triumph—an everlasting bonfire light: thou hast saved me a thousand marks in links and torches, walking with me in the night betwixt tavern and tavern; but the Sack thou hast drunk me would have bought me lights as good cheap, at the dearest chandler's in Europe. I have maintained that salamander of yours with fire any time this two and thirty years—heaven reward me for it!"

known as such from an early age—mention being made of it by Hippocrates, Aretæus, and Galen. Among the Roman ladies, gout was very prevalent, during the latter times of the empire; and, at the present day, there are few noblemen who have it not to hand down to their offspring as a portion of their heritage.

VIII. *Tremors.*—A general tremor is an attendant upon almost all drunkards. This proceeds from nervous irritability. Even those who are habitually temperate, have a quivering in their hands next morning, if they indulge overnight in a debauch. While it lasts, a person cannot hold any thing without shaking, neither can he write steadily. Among those who have long devoted themselves to the mysteries of Silenus, this amounts to a species of palsy, affecting the whole body, and even the lips, with a sort of paralytic trembling. On awaking from sleep, they frequently feel it so strongly, as to seem in the cold fit of an ague, being neither able to walk steadily, nor articulate distinctly. It is singular, that the very cause of this distemper should be employed for its cure. When the confirmed drunkard awakes with tremor, he immediately swallows a dram: the most violent shaking is quieted by this means. The opium-eater has

recourse to the same method: to remove the agitation produced by one dose of opium, he takes another. This, in both cases, is only adding fuel to the fire, the tremors coming on at shorter intervals, and larger doses being required for their removal.

Drunkards are more subject than any other class of people to apoplexy and palsy.

IX. *Palpitation of the Heart.*—This is a very distressing consequence of drunkenness, producing difficult breathing, and such a determination to the head as often brings on giddiness. Drunkards are apt to feel it as they step out of bed, and the vertigo is frequently so great as to make them stumble. There are some sober persons who are much annoyed by this affection. In them it may arise from spasmodic action of the fibres of the heart, nervous irritability, or organic disease, such as aneurism or angina pectoris.

X. *Hysteria.*—Female drunkards are very subject to hysterical affections. There is a delicacy of fibre in women, and a susceptibility of mind, which make them feel more acutely than the other sex all external influences. Hence their whole system is often violently affected with hysterics and other varieties of nervous

weakness. These affections are not always traced to their true cause, which is often neither more nor less than dram-drinking. When a woman's nose becomes crimsoned at the point, her eyes somewhat red, and more watery than before, and her lips fuller and less firm and intellectual in their expression, we may suspect that something wrong is going on.

XI. *Epilepsy.*—Drunkenness may bring on epilepsy, or falling-sickness, and may excite it into action in those who have the disease from other causes. Many persons cannot get slightly intoxicated without having an epileptic or other convulsive attack. These fits generally arise in the early stages, before drunkenness has got to a height. If they do not occur early, the individual will probably escape them altogether for the time.

XII. *Emaciation.*—Emaciation is peculiarly characteristic of the spirit-drinker. He wears away, before his time, into the "lean and slippered pantaloon" spoken of by Shakspeare in his "Stages of Human Life." All drunkards, however, if they live long enough, become emaciated. The eyes get hollow, the cheeks fall in, and wrinkles soon furrow the countenance with the marks of age. The fat is absorbed from

every part, and the rounded plumpness which formerly characterized the body soon wears away. The whole form gets lank and debilitated. There is a want of due warmth, and the hand is usually covered with a chill clammy perspiration.

From the general defect of vital power in the system, the children of drunkards are neither numerous nor healthy. They are usually puny and emaciated, and more than ordinarily liable to inherit all the diseases of their parents. Their intellect is also, in most cases, below the general standard.

XIII. *Corpulency.*—Malt liquor and wine drinkers are, for the most part, corpulent, a circumstance which rarely attends the spirit drinker, unless he be, at the same time, a *bon vivant.* Both wines and malt liquors are more nourishing than spirits. Under their use, the blood becomes, as it were, enriched, and an universal deposition of fat takes place throughout the system. The omentum and muscles of the belly are, in a particular manner, loaded with this secretion; whence the abdominal protuberance so remarkable in persons who indulge themselves in wine and ales. As the abdomen is the part which becomes most enlarged, so is it that which longest retains its enlargement. It seldom parts with it, indeed, even in the last stages,

when the rest of the body is in a state of emaciation. There can be no doubt that the parts which first lose their corpulency are the lower extremities. Nothing is more common than to see a pair of spindle-shanks tottering under the weight of an enormous corporation, to which they seem attached more like artificial appendages, than natural members. The next parts which give way are the shoulders. They fall flat, and lose their former firmness and rotundity of organization. After this, the whole body becomes loose, flabby, and inelastic; and five years do as much to the constitution as fifteen would have done under a system of strict temperance and sobriety. The worst symptom that can befal a corpulent man, is the decline of his lower extremities. * So long as they continue firm, and correspond with the rest of the body, it is a proof that there is still vigour remaining; but

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* This circumstance has not escaped the observation of Shakspeare.—"*Chief Justice.* Do you set down your name in the scroll of youth, that are written down old, with all the characters of age? Have you not a moist eye, a dry hand, a yellow cheek, a white beard, a *decreasing* leg, an increasing belly? Is not your voice broken, your wind short, your chin double, your wit single, and every part about you blasted with antiquity; and will you yet call yourself young? Fie, fie, fie, Sir John!"

when they gradually get attenuated, while other parts retain their original fulness, there can be no sign more sure that his constitution is breaking down, and that he will never again enjoy his wonted strength.

XIV. *Premature Old Age.*—Drunkenness has a dreadful effect in anticipating the effects of age. It causes time to pace on with giant strides—chases youth from the constitution of its victims—and clothes them prematurely with the grey garniture of years. How often do we see the sunken eye, the shrivelled cheek, the feeble, tottering step, and hoary head, in men who have scarcely entered into the autumn of their existence. To witness this distressing picture, we have only to walk out early in the mornings, and see those gaunt, melancholy shadows of mortality, betaking themselves to the gin-shops, as to the altar of some dreadful demon; and quaffing the poisoned cup to his honour, as the Carthaginians propitiated the deity of their worship, by flinging their children into the fire which burned within his brazen image. Most of these unhappy persons are young, or middle-aged men; and though some drunkards attain a green old age, they are few in number compared with those who sink untimely into the grave, ere the days of their

youth have well passed by.* Nothing is more common than to see a man of fifty, as hoary, emaciated, and wrinkled, as if he stood on the borders of fourscore.

XV. *Ulcers.*—Ulcers often break out on the bodies of drunkards. Sometimes they are fiery and irritable, but in general they possess an indolent character. Of whatever kind they may be, they are always aggravated in such constitutions. A slight cause gives rise to them; and a cut or bruise which, in health, would have healed in a few days, frequently degenerates into a foul, sloughy sore. When drunkards are affected with scrophula, scurvy, or any cutaneous disease whatever, they always, *cæteris paribus*, suffer more than other people.

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* "Let nobody tell me that there are numbers who, though they live most irregularly, attain, in health and spirits, those remote periods of life attained by the most sober; for this argument being grounded on a case full of uncertainty and hazard, and which, besides, so seldom occurs as to look more like a miracle than the work of nature, men should not suffer themselves to be thereby persuaded to live irregularly, nature having been too liberal to those who did so without suffering by it; a favour which very few have any right to expect."—*Cornaro on Health.*

XVI. *Melancholy.*—Though drunkards over their cups are the happiest of mankind, yet, in their solitary hours, they are the most wretched. Knawing care, heightened perhaps by remorse, preys upon their conscience. While sober, they are distressed both in body and mind, and fly to the bowl to drown their misery in oblivion. Those, especially, whom hard fate drove to this desperate remedy, feel the pangs of low spirits with seven-fold force. The weapon they employ to drive away care is turned upon themselves. Every time it is used, it becomes less capable of scaring the fiend of melancholy, and more effectual in wounding him that uses it.

All drunkards are apt to become peevish and discontented with the world. They turn enemies to the established order of things, and, instead of looking to themselves, absurdly blame the government as the origin of their misfortunes.

XVII. *Madness.**—This terrible infliction often

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* "The excessive use of spirituous liquors among the lower ranks of people, is justly considered a great cause of that deplorable evil *insanity*, to which they are liable, as well as to those bilious and dropsical complaints, formerly so little known." —*Sir John Sinclair.*

proceeds from drunkenness. When there is hereditary predisposition, indulgence in liquor is more apt to call it into action than when there is none. The mind and body act reciprocally upon one another; and when the one is injured, the other must suffer more or less. In intemperance, the structure of the brain is no longer the same as in health; and the mind, that immortal part of man, whose manifestations depend upon this organ, suffers a corresponding injury.

Intoxication may affect the mind in two ways. A person, after excessive indulgence in liquor, may be seized with delirium, and run into a state of violent outrage and madness. In this case the disease comes suddenly on: the man is fierce and intractable, and requires a strait-jacket to keep him in order. Some never get drunk without being insanely outrageous: they attack, without distinction, all who come in their way, foam at the mouth, and lose all sense of danger. This fit either goes off in a few hours, or degenerates into a confirmed attack of lunacy. More generally, however, the madness of intoxication is of another character, partaking of the nature of idiotism, into which state, the mind resolves itself, in consequence of a long-continued falling off in the intellectual powers.

Drunkenness, according to the reports of Bethlehem Hospital, and other similar institutions for the insane,

is one of the most common causes of lunacy; and there are few but must have witnessed the wreck of the most powerful minds, by this destructive habit. It has a more deplorable effect upon posterity than any other practice, for it entails not only bodily disease upon the innocent offspring, but also the more afflicting diseases of the mind.*

XVIII. *Delirium Tremens.*—Both the symptoms and treatment of this affection require to be mentioned, because, unlike the diseases already enumerated, it originates *solely* in the excessive use of stimulating liquors, and is cured in a manner peculiar to itself.

Delirium tremens seldom takes place except in

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* It has been considered unnecessary to enter into any detail of the nature and treatment of the foregoing diseases, because they may originate from many other causes besides drunkenness; and when they do arise from this source, they acquire a peculiarity of character. Their treatment is also precisely the same as in ordinary cases—it being always understood, that the bad habit which brought them on must be abandoned before any good can result from medicine. The disease, however, which follows is different, and requires particular consideration.

confirmed drunkards. It occurs generally after an excessive fit of drinking which has continued for some days without intermission; but I have also known it to arise from a person having been too suddenly deprived of the stimulus to which he had been long accustomed. A medical friend lately mentioned to me the case of one of his patients who fractured his leg, and who, in consequence of the abstemiousness requisite in such a case, was seized with this disease four days after the accident. Delirium tremens comes on with lassitude, loss of appetite, and frequent exacerbations of cold. The pulse is weak and quick, and the body covered with a chilly moisture. The countenance is pale, there are usually tremors of the limbs, anxiety, and a total disrelish for the common amusements of life. Then succeed retching, vomiting, and much oppression at the pit of the stomach. When the person sleeps, which is but seldom, he frequently starts in the utmost terror, having his imagination haunted by frightful dreams. To the first coldness, glows of heat succeed, and the slightest renewed agitation of body or mind, sends out a profuse perspiration. The tongue is dry and furred: every object appears unnatural and hideous. There is a constant dread of being haunted by spectres. Black or luminous bodies seem to float before the person: he conceives

that vermin and all sorts of impure things are crawling upon him, and is constantly endeavouring to pick them off. His ideas are wholly confined to himself and his own affairs, of which he entertains the most disordered notions. He imagines that he is away from home, forgets those who are around him, and is irritated beyond measure by the slightest contradiction. Calculations, buildings, and other fantastic schemes often occupy his mind; and a belief that every person is confederated to ruin him, is commonly entertained. This state generally lasts from four to ten days, and goes off after a refreshing sleep; but sometimes, either from the original violence of the disease or from improper treatment, it proves fatal. There is another termination which the complaint sometimes, though rarely, assumes. It may run into madness or confirmed idiotism. Indeed, when it continues much beyond the time mentioned, there is danger of the mind becoming permanently alienated.

Subsultus, low delirium, very cold skin, contracted pupil, strabismus, short intermitting pulse, and frequent vomiting, are indications of great danger.

This disease is to be distinguished from typhus, in not being contagious, and in having neither the petechiæ nor cadaverous smell that often occur in this variety of fever. The delirium is not so impetuous in its

attack, and there is, from the beginning, less prostration of strength.

From phrenitis it is readily distinguishable, by being attended with a more moderate degree of fever, by the want of turgescency, redness of the eyes, and intolerance of light. The face likewise, instead of being flushed, is pale, and the pulse weak.

It is distinguished from mania by being without the wild, furious glassy eye of persons labouring under that disorder.

"Those patients who have been driven to intoxication from some great affliction, are generally in imminent danger; for, during the progress of the complaint, their raving incessantly turns upon the recent calamity, and produces an irritation and exhaustion most difficult to be counteracted. But confirmed drunkards, who have previously laboured under chronic hepatitis, or some similar organic affection, perhaps stand the worst chance; at least I have seen two subjects of this kind who sank rapidly under the disease."*

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* Armstrong's Practical Illustrations of Typhus Fever, &c. a work to which I am indebted for some valuable hints, and to which the reader is referred for farther information on Delirium Tremens.

In treating this disease, particular attention must be paid to the constitution of the patient. As a general rule, blooding is very prejudicial. The only cases in which it is admissable, are in plethoric subjects, especially when there is much local affection. Even here it must be used in moderation, and only at the commencement of the complaint. In like manner, purgatives cannot be employed except at the beginning: nor at any period can they be carried to a great extent. As the bowels are, in most cases, in extreme disorder, and the evacuations black and viscid, some smart physic should be given early; but when the disease has proceeded any length, the less we have to do with such medicines the better. As soon as the bowels have been opened, a quantity of tepid water strongly impregnated with salt, should be dashed over the body, and the person immediately thereafter well dried and put to bed. Laudanum should then be administered in doses of from forty to sixty drops, according to circumstances, and repeated every now and then till sleep be procured. The great object of the treatment is to soothe the apprehensions of the patient, and procure him rest. A moderate quantity of wine will be necessary, especially if he has been a confirmed drinker, and labours under much weakness. The principal means, indeed, after purging has been carried to its due

extent, are wine, opium, and tepid effusion: the latter may be tried two, three, or four times in the twenty-four hours, as occasion requires. The mind is, at the same time, to be soothed in the gentlest manner, the whimsical ideas of the patient to be humoured, and his fancies indulged as far as possible. All kinds of restraint or contradiction are most hurtful. Some recommend blisters to the head, but these are, in every case, injurious.

Such are the principal diseases brought on by drunkenness. There are still several others which have not been enumerated—nor is there any affection incident to either the body or mind, which this vice does not aggravate into double activity. The number of persons who die in consequence of complaints so produced, is much greater than unprofessional people imagine. This fact is well known to medical men, who are aware that many of the cases they are called upon to attend, originate in liquor, although very often the circumstance is totally unknown either to the patient or his friends. This is particularly the case with regard to affections of the liver, stomach, and other viscera concerned in digestion.

CHAPTER X.

SLEEP OF DRUNKARDS.

THE drunkard seldom knows the delicious and refreshing slumbers of the temperate man. He is restless, and tosses in bed for an hour or two before falling asleep. Even then his rest is not comfortable. He awakes frequently during night, and each time his mouth is dry, his skin parched, and his head, for the most part, painful and throbbing. These symptoms, from the irritable state of his constitution, occur even when he goes soberly to bed; but if he lie down heated with liquor, he feels them with double force. Most persons who fall asleep in a state of intoxication, have much headach, exhaustion, and general fever, on awaking. Some constitutions are lulled to rest by

liquors, and others rendered excessively restless; but the first are no gainers by the difference, as they suffer abundantly afterwards. Phlegmatic drunkards drop into slumber more readily than the others: their sleep is, in reality, a sort of apoplectic stupor.

I. *Dreams.*—Dreams may be readily supposed to be common, from the deranged manifestations of the brain which occur in intoxication. They are usually of a painful nature, and leave a gloomy impression upon the mind. In general, they are less palpable to the understanding than those which occur in soberness. They come like painful grotesque conceptions across the imagination; and though this faculty can embody nothing into shape, meaning, or consistence, it is yet haunted with melancholy ideas. These visions depend much on the mental constitution of the person, and are modified by his habitual tone of thinking. It is, however, to be remarked, that while the waking thoughts of the drunkard are full of sprightly images, those of his sleep are usually tinged with a shade of perplexing melancholy.

II. *Nightmare.*—Drunkards are subject to nightmare. There are many persons, whether sober or dissipated, who cannot lie long on their backs without

an attack of this distressing affection. It seldom, indeed, comes on except in this posture. It is commonly supposed to occur only when the sleep is unusually profound. Many observations have convinced me that this opinion is erroneous, and that it may take place when we are but half asleep. Dr. Darwin says, that on awaking from nightmare, he has observed that his pulse was not accelerated; and he is disposed to think, contrary to the general belief, that there is no laboriousness of respiration. Whether this is correct, I am not prepared to say, but I have remarked, that, whatever may have been the state of breathing and pulsation during the fit, both are affected on coming out of it. The heart, on the relief from terror, beats quickly, and the breathing is invariably hurried.

Physiologists have generally imputed incubus to mechanical compression upon the diaphragm from a full stomach. This, probably, is very often the real cause, for we find that after eating a hearty supper we are more disposed to it than at other times. The blood, in consequence of the full expansion of the lungs being prevented, accumulates in the right cavities of the heart. These circumstances naturally produce a degree of oppression, and would lead us to infer, contrary to the author of the Zoonomia, that, in many

cases at least, the breathing must be laborious. There are, however, I am convinced, examples of nightmare which are referrible to other causes than mere mechanical compression of the lungs. It may certainly be brought on by sympathetic connection between the stomach and brain. Such instances we sometimes meet with in those who are subject to chronic gastritis.

Drunkards are more afflicted than other people with this disorder, in so far as they are equally subject to all the ordinary causes, and liable to others, from which sober people are exempted. Intoxication is fertile in producing reveries and dreams, those playthings of the fancy; and it may also give rise to such a distortion of idea, as to call up incubus, and all its frightful accompaniments. *

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* The following very ingenious theory of nightmare is given in the ninth number of the Medical Adviser:—"It is a suspension of power in the muscles of inspiration: the weight, the want of breathing, and the sense of suffocation prove this; and a still greater proof is, that after the sufferer can speak only one syllable, the paroxysm is at an end. The word cannot be spoken without breath—breath cannot come out of the lungs until it is brought in, nor brought in without the action of the muscles of the breast and ribs. Nothing can be more simple than the cause—it is the temporary paralysis of the pectoral muscles, through the medium of the nerves which supply them with

III. *Sleep-walking.*—Somnambulism is another affection to which drunkards are more liable than their neighbours. I apprehend that, *in general*, the slumber must be very profound when it takes place; but a person may exhibit it when only half asleep, if his mind is partially stupified by liquor. The phrenologists account ingeniously for sleep-walking, by supposing that some of the organs are quiescent while others are in a state of activity. Drunkards, even when consciousness is not quite abolished, frequently leave their beds and walk about the room. They know perfectly well what they are about, and recollect it afterwards, but if questioned, either at the moment or at any future period, they are totally unable to give any reason for their conduct. Sometimes, after getting up, they stand a little time and endeavour to account for rising, then go again deliberately to bed. There is often, in the

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feeling. What is the remote cause, or the cause of this suspension of power, is not so easily defined. It may be from contraction in some of the great pulmonary vessels, or it may be affected in the course of the pectoral nerves through the brain, or through sympathy of the nerves of the stomach, or liver and spleen. The latter organs are decidedly interested in producing the disease, for it is always accompanied with derangement of them."

behaviour of these individuals, a strange mixture of folly and rationality. Persons half tipsy have been known to arise and go out of doors in their night-dress, being all the while sensible of what they were doing, and aware of its absurdity. The drunken somnambulism has not always this character. Sometimes the person is in a profound slumber, and has no consciousness of what he does. From drinking, the affection is always more dangerous than from any other cause, as the muscles have no longer their former strength, and are unable to support the person in his hazardous expeditions. If he gets upon a house-top, he does not balance himself properly, from giddiness; he is consequently liable to falls and accidents of every kind. It is considered, with justice, dangerous to awaken a sleep-walker. In a drunken fit, there is less risk than under other circumstances, the mind being so far confused by intoxication as to be, in some measure, insensible to the shock.

In this affection, the eyes are often, perhaps generally, open, and communicate impressions to the mind. The ears, likewise, are not always impervious to sounds, for a sleep-walker, when spoken to, will sometimes answer rationally. It appears that there is, in this state, a certain connection between the body and the mind. The principal fault lies in the

judgment, which exercises no power over the will. Hence, somnambulists get into the most hazardous situations, from want of *understanding* to check the blind impulses of instinct and volition. Courage is not, with them, an abstract quality, but proceeds, as in maniacs, from an ignorance of danger.*

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* For farther information on sleep, the reader is referred to Darwin's *Zoonomia*, Richerand's Physiology, Walker's Treatise on Incubus, and Bond's Essay on the same.

CHAPTER XI.

SPONTANEOUS COMBUSTION OF DRUNKARDS.

WHETHER such a quantity of hydrogen may accumulate in the bodies of drunkards as to sustain combustion, I profess myself totally unable to determine. This subject is, indeed, one which has never been satisfactorily investigated; and, notwithstanding the cases brought forward in support of the doctrine, the general opinion seems to be, that the whole is fable, or at least so much involved in obscurity as to afford no just grounds for belief. The principal information on this point, is in the Journal de Physique, in an article by Pierre Aime Lair, a copy of which was published in the sixth volume of the Philosophical Transactions, by Mr. Alexander Tilloch. A number of cases are there

given; and it is not a little singular that the whole of them are those of women in advanced life. When we consider that writers like Vicq d'Azyr, Le Cat, Jacobœus, Rolli, and Bianchini, have given their testimony in support of such facts, it requires some effort to believe them unfounded in truth. At the same time, in perusing the cases themselves, it is impossible to divest the mind of an idea that some misstatement or other exists either as to their alleged cause or their actual nature—and that their relators have been led into an unintentional misrepresentation. So thoroughly am I satisfied of this, that I think it doubtful whether, if the clothes of a notorious drunkard were to catch fire, his body would be more severely injured, or more liable to become inflammable than that of the soberest person. It seems probable that to the effects of a stroke of lightning are we to impute many of the cases in question. M. Foderé remarks, that hydrogen gas is developed in certain cases of disease, even in the living body; and he seems inclined to join with M. Mere in attributing what is called spontaneous combustion, to the united action of hydrogen and electricity in the first instance, favoured by the accumulation of animal oil, and the impregnation of spirituous liquors. In the present state of our knowledge, it is needless to hazard any conjectures upon this mysterious

subject. The best way is to give a case or two, and let the reader judge for himself.

Case of Mary Clues.—"This woman, aged fifty, was much addicted to intoxication. Her propensity to this vice had increased after the death of her husband, which happened a year and a half before: for about a year, scarcely a day had passed in the course of which she did not drink at least half a pint of rum or aniseed-water. Her health gradually declined, and about the beginning of February, she was attacked by the jaundice and confined to her bed. Though she was incapable of much action, and not in a condition to work, she still continued her old habit of drinking every day, and smoking a pipe of tobacco. The bed in which she lay stood parallel to the chimney of the apartment, the distance from it of about three feet. On Saturday morning, the 1st of March, she fell on the floor, and her extreme weakness having prevented her from getting up, she remained in that state till some one entered and put her to bed. The following night she wished to be left alone: a woman quitted her at half-past eleven, and, according to custom, shut the door and locked it. She had put on the fire two large pieces of coal, and placed a light in a candlestick on a chair at the head of the bed. At half-past five in

the morning, smoke was seen issuing through the window, and the door being speedily broke open, some flames which were in the room were soon extinguished. Between the bed and the chimney were found the remains of the unfortunate Clues; one leg and a thigh were still entire, but there remained nothing of the skin, the muscles, and the viscera. The bones of the cranium, the breast, the spine, and the upper extremities were entirely calcined, and covered with a whitish efflorescence. The people were much surprised that the furniture had sustained so little injury. The side of the bed which was next the chimney had suffered most; the wood of it was slightly burned, but the feather-bed, the clothes, and covering were safe. I entered the apartment about two hours after it had been opened, and observed that the walls and every thing in it were blackened; that it was filled with a very disagreeable vapour; but that nothing except the body exhibited any strong traces of fire."

This case first appeared in the Annual Register for 1773, and is a fair specimen of the cases collected in the Journal de Physique. There is no evidence that the combustion was spontaneous, as it may have been occasioned either by lightning, or by contact with the fire. The only circumstance which militates

against the latter supposition, is the very trifling degree of burning that was found in the apartment.

Case of Don Gio Maria Bertholi.—"Having spent the day in travelling about the country, he arrived in the evening at the house of his brother-in-law. He immediately requested to be shown to his destined apartment, where he had a handkerchief placed between his shirt and shoulders; and, being left alone, betook himself to his devotions. A few minutes had scarcely elapsed when an extraordinary noise was heard in the chamber, and the cries of the unfortunate man were particularly distinguished: the people of the house hastily entering the room, found him extended on the floor, and surrounded by a light flame, which receded (*à mesure*) as they approached, and finally vanished. On the following morning, the patient was examined by M. Battlaglia, who found the integuments of the right arm almost entirely detached, and pendant from the flesh; from the shoulders to the thighs, the integuments were equally injured; and on the right hand, the part most injured, mortification had already commenced, which, notwithstanding immediate scarification, rapidly extended itself. The patient complained of burning thirst, was horribly convulsed, and was exhausted by continual vomiting, accompanied by

fever and delirium. On the fourth day, after two hours of comatose insensibility, he expired. During the whole period of his suffering, it was impossible to trace any symptomatic affection. A short time previous to his death, M. Battlaglia observed with astonishment that putrefaction had made so much progress; the body already exhaled an insufferable odour; worms crawled from it on the bed, and the nails had become detached from the left hand.

"The account given by the unhappy patient was, that he felt a stroke like the blow of a cudgel on the right hand, and at the same time he saw a lambent flame attach itself to his shirt, which was immediately reduced to ashes, his wristbands, at the same time, being utterly untouched. The handkerchief, which, as before mentioned, was placed between his shoulders and his shirt, was entire, and free from any trace of burning; his breeches were equally uninjured, but though not a hair of his head was burned, his coif was totally consumed. The weather, on the night of the accident, was calm, and the air very pure; no empyreumatic or bituminous odour was perceived in the room, which was also free from smoke; there was no vestige of fire, except that the lamp which had been full of oil, was found dry, and the wick reduced to a cinder."

This case is from the work of Foderé, and is given as abridged by Paris and Fonblanque, in their excellent treatise on Medical Jurisprudence. It occured in 1776, and is one of the best authenticated to be met with. I am not aware that the subject of it was a drunkard: if he were not, and if the facts be really true, we must conclude that spontaneous combustion may occur in sober persons, as well as in the dissipated.

Some chemists have attempted to account for this kind of combustion, by the formation of phosphuretted hydrogen in the body. This gas, as is well known, inflames on exposure to the air; nor can there be a doubt that if a sufficient quantity were generated, the body might be easily enough consumed. If such an accumulation can be proved ever to take place, there is an end to conjecture; and we have before us a cause sufficiently potent to account for the burning. But all the related cases rest on vague report, and are unsupported by such evidence as would warrant us in placing much reliance upon them. Inflammable eructations are said to occur occasionally in northern latitudes, when the body has been exposed to intense cold after excessive indulgence in spirituous liquors; and the case of a Bohemian peasant is narrated, who lost his life in consequence of a column of ignited inflammable air issuing from his mouth, and baffling

extinction. This case, as well as others of the same kind, is alleged to have arisen from phosphuretted hydrogen, generated by some chemical combination of alcohol and animal substances in the stomach. What truth there may be in these relations I do not pretend to say. They wear, unquestionably, the aspect of fiction; and are, notwithstanding, repeated from so many quarters, that it is nearly as difficult to doubt them altogether as to give them our entire belief. There is one thing, however, which may be safely denied; and that is the fact of drunkards having been blown up in consequence of their breath or eructations catching fire from the application of a lighted candle. These tales are principally of American extraction; and seem elaborated by that propensity for the marvellous for which our transatlantic brethren have, of late years, been distinguished.

The subject of spontaneous combustion is one well worth investigating both in a medical and judicial point of view. At present it is unnecessary to enter more deeply into it, as it is supported more by hypothesis and loose analogy than by authenticated facts. In arguing upon its possibility, one great error has been committed by physicians; and that is the circumstance of confounding the state of the living system with that of the dead. In *post mortem* examinations, nothing is

more common than to find the body charged with inflammable gases; whence the insufferable odour which exhales from it. That such a quantity of these might accumulate, as to support combustion, is, perhaps, not impossible, but it is to be remembered, that they are the result of decomposition,—and that such decomposition cannot take place to any extent in the living fibre. When animal matter runs into decay, it parts with many of the laws which vitality imposed upon it, and enters under the dominion of others. But chemists, who in general are indifferent physiologists, have neglected these facts, and have thus been the means of introducing into medicine much that is erroneous, both in theory and practice.

CHAPTER XII.

DRUNKENNESS JUDICIALLY CONSIDERED.

Not only does the drunkard draw down upon himself many diseases, both of body and mind, but if, in his intoxication, he commit any crime or misdemeanour he becomes, like other subjects, amenable to the pains of law. In this respect, indeed, he is worse off than sober persons, for drunkenness, far from palliating, is held to aggravate every offence: the law does not regard it as any extenuation of crime. "A drunkard," says Sir Edward Coke, "who is *voluntarius demon*, hath no privilege thereby; but what hurt or ill soever he doth, his drunkenness doth aggravate it." In the case of the King *versus* Maclauchlin, March, 1737, the plea of drunkenness, set up in miti-

gation of punishment, was not allowed by the court. Sir George Mackenzie says, he never found it sustained, and that in a case of murder it was repelled—Spott *versus* Douglas, 1667. Sir Matthew Hales, c. 4, is clear against the validity of the defence, and all agree that "*levis et modica ebrietas non excusat nec minuit delictum.*" It is a maxim in legal practice, that "those who presume to commit crimes when drunk, must submit to punishment when sober." This state of the law is not peculiar to modern times. In ancient Greece, it was decreed by Pittacus, that "he who committed a crime when intoxicated, should receive a double punishment," *viz.* one for the crime itself, and the other for the ebriety which prompted him to commit it. The Athenians not only punished offences done in drunkenness with increased severity, but, by an enactment of Solon, inebriation in a magistrate was made capital. The Roman law was, in some measure, an exception, and admitted ebriety as a plea for any misdeeds committed under its influence: *per vinum delapsis capitalis pœna remittitur.* Notwithstanding this tenderness to offences by drunkards, the Romans, at one period, were inconsistent enough to punish the vice itself with death, if found occurring in a woman. By two acts passed in the reign of James I., drunkenness was punishable with fine, and, failing

payment, with sitting publicly for six hours in the stocks; 4 Jac. I. c. 5, and 21 Jac. I. c. 7. By the first of these acts, justices of the peace may proceed against drunkards at the sessions, by way of indictment; and this act still remains in operation. The ecclesiastical courts may also take cognizance of the offence, and punish it accordingly. A bond signed in a fit of intoxication, holds in law, and is perfectly binding, unless it can be shown that the person who signed it was inebriated by the collusion or contrivance of those to whom the bond was given. A judge or magistrate found drunk upon the bench, is liable to removal from his office; and decisions pronounced by him in that state are held to be null and void. Even in blasphemy, uttered in a state of ebriety, the defence goes for nothing, as is manifest from the following case, given in Maclaurin's Arguments and Decisions, p. 732.

"Nov. 22, 1697. Patrick Kinninmouth, of that ilk, was brought to trial for blasphemy and adultery. The last charge was passed from. The indictment alleged, He had affirmed Christ was a bastard, and that he had said, 'If any woman had God on one side, and Christ on the other, he would stow [cut] the lugs [ears] out of her head in spite of them both.' He pleaded chiefly that he was drunk or mad when he uttered these expressions, if he did utter them. The court

found the libel relevant to infer the pains libelled, *i. e.* death; and found the defence, That the pannel was furious or distracted in his wits relevant; but repelled the alledgeance of fury or distraction arising *from drunkenness.*"

It thus appears that the laws both of Scotland and England agree in considering drunkenness no palliation of crime, but rather the reverse; and it is well that it is so, seeing that ebriety could be easily counterfeited, and made a cloak for the commission of atrocious offences. By the laws, drunkenness is looked upon as criminal, and this being the case, they could not consistently allow one crime to mitigate the penalties due to another.

CHAPTER XIII.

METHOD OF CURING THE HABIT OF DRUNKENNESS.

To remove the habit of drunkenness from any one in whom it has been long established, is a task of peculiar difficulty. We have not only to contend against the cravings of the body, but against those of the mind; and in struggling with both, we are, in reality, carrying on a combat with nature herself. The system no longer performs its functions in the usual manner; and to restore these functions to their previous tone of action, is more difficult than it would be to give them an action altogether the reverse of nature and of health.

The first step to be adopted, is the discontinuance of all liquors or substances which have the power of

intoxicating. The only question is—should they be dropped at once, or by degrees? Dr. Trotter, in his Essay on Drunkenness, has entered into a long train of argument, to prove that, in all cases, they ought to be given up *instanter*. He contends, that, being in themselves injurious, their sudden discontinuance cannot possibly be attended with harm. But his reasonings on this point, though ingenious, are not conclusive. A dark unwholesome dungeon is a bad thing, but it has been remarked, that those who have been long confined to such a place, have become sick if suddenly exposed to the light and pure air, on recovering their liberty: had this been done by degrees, no evil effects would have ensued. A removal from an unhealthy climate (to which years had habituated a man) to a healthy one, has sometimes been attended with similar consequences. Even old ulcers cannot always be quickly healed up with safety. Inebriation becomes, as it were, a second nature, and is not to be rapidly changed with impunity, more than other natures. Spurzheim* advances the same opinion. "Drunkards," says he, "cannot leave off their bad habits suddenly, without injuring their

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* View of the Elementary Principles of Education.

health." Dr. Darwin speaks in like terms of the injurious effects of too sudden a change; and for these, and other reasons about to be detailed, I am disposed, upon the whole, to coincide with them.

If we consider attentively the system of man, we will be satisfied that it accommodates itself to various states of action. It will perform a healthy action, of which there is only one state, or a diseased action, of which there are a hundred. The former is uniform, and homogeneous. It may be raised or lowered according to the state of the circulation, but its nature is ever the same: when that changes—when it assumes new characters—it is no longer the action of health, but of disease. The latter may be multiplied to infinity, and varies with a thousand circumstances; such as the organ which is affected, and the substance which is taken. Now, drunkenness, in the long run, is one of those diseased actions. The system no longer acts with its original purity: it is operated upon by a fictitious excitement, and, in the course of time, assumes a state quite foreign to its original constitution—an action which, however unhealthy, becomes, ultimately, in some measure, natural. When we use opium for a long time, we cannot immediately get rid of it, because it has given rise to a false action in the system—which latter would suffer a sudden disorder if deprived

of its accustomed stimulus. Disease here triumphs over health, and has established so strong a hold upon the body, that it is dislodged with difficulty by its lawful possessor. When we wish to get rid of opium, or any other narcotic to which we are accustomed, we must do so by degrees, and let the healthy action gradually expel the diseased one. Place spirits or wine in the situation of opium, and the results will be the same. For these reasons, I am inclined to think, that, in many cases at least, it would be improper and dangerous to remove intoxicating liquors all at once from the drunkard. Such a proceeding seems at variance with the established actions of the human body, and as injudicious as unphilosophical.

I do not, however, mean to say, that there are no cases in which it would be necessary to drop liquors all at once. When much bodily vigour remains—when the morning cravings for the bottle are not irresistible, nor the appetite altogether broken, the person should give over his bad habits instantly. This is a state of incipient drunkenness. He has not yet acquired the constitution of a confirmed sot, and the sooner he ceases the better. The immediate abandonment of drinking may also, in general, take place when there is any organic disease, such as enlarged liver, dropsy, or schirrus stomach. Under these circum-

stances, the sacrifice is much less than at a previous period, as the frame has, in a great measure, lost its power of withstanding liquors, and the relish for them is also considerably lessened. But even then, the sudden deprivation of the accustomed stimulus has been known to produce dangerous exhaustion; and it has been found necessary to give it again, though in more moderate quantities. Those drunkards who have no particular disease, unless a tremor and loss of appetite be so denominated, require to be deprived of the bottle by degrees. Their system would be apt to fall into a state of torpor if it were suddenly taken away, and various mental diseases, such as melancholy, madness, and delirium tremens, might even be the result. With such persons, however, it must be acknowledged that there is very great difficulty in getting their potations diminished. Few have fortitude to submit to any reduction. There is, as the period of the accustomed indulgence arrives, an oppression and faintness at the *præcordia*, which human nature can scarcely endure, together with a gnawing desire, infinitely more insatiable than the longings of a pregnant woman.

There are many persons that cannot be called drunkards, who, nevertheless, indulge pretty freely in the bottle, though after reasonable intervals. Such persons usually possess abundance of health, and

resist intoxication powerfully. Here the stomach and system in general lose their irritability, in the same way as in confirmed topers, but this is more from torpor than from weakness. The springs of life become less delicate; the pivots on which they move get, as it were, clogged, and, though existence goes on with vigour, it is not the bounding and elastic vigour of perfect health. This proceeds not from debility, but from torpor; the muscular fibre becoming, like the hands of a labouring man, hardened and blunted in its sensibilities. Such are the effects brought on by a *frequent* use of inebriating agents, but an *excessive* use in every case gives rise to weakness. This the system can only escape by a proper interval being allowed to elapse between our indulgences. But if dose be heaped on dose, before it has time to rally from former exhaustion, it becomes more and more debilitated; the blood ceases to circulate with its wonted force; the secretions get defective; and the tone of the living fibre daily enfeebled.

Drunkenness, in the long run, changes its character. The sensations of the confirmed tippler, when intoxicated, are nothing, in point of pleasure, to those of the habitually temperate man, in the same condition. We drink at first for the serenity which is diffused over the mind, and not from any positive love we bear to

the liquor. But, in the course of time, the influence of the latter, in producing gay images, is deadened. It is then chiefly a mere animal fondness for drink which actuates us. We like the taste of it, as a child likes sweatmeats; and the stomach, for a series of years, has been so accustomed to an unnatural stimulus, that it cannot perform its functions properly without it. In such a case, it may readily be believed that liquor could not be suddenly removed with safety.

The habit will sometimes be checked by operating skilfully upon the mind. If the person has a feeling heart, much may be done by representing to him the state of misery into which he will plunge himself, his family, and his friends. Some men, by a strong effort, have given up liquors at once, in consequence of such representations.

Many men become drunkards from family broils. They find no comfort at home, and gladly seek for it out of doors. In such cases, it will be almost impossible to break the habit. The domestic sympathies and affections, which oppose a barrier to dissipation, and wean away the mind from the bottle, have here no room to act. When the mother of a family becomes addicted to liquor, the case is very afflicting. Home, instead of being the seat of comfort and order, becomes a species of Pandemonium: the social circle is broken

up, and all its happiness destroyed. In this case, there is no remedy but the removal of the drunkard. A feeling of perversity has been known to effect a cure among the fair sex. A man of Philadelphia, who was afflicted with a drunken wife, put a cask of rum in her way, in the charitable hope that she would drink herself to death. She suspected the scheme, and, from a mere principle of contradiction, abstained, in all time coming, from any sort of indulgence in the bottle.

Man is very much the creature of habit. By drinking regularly at certain times, he feels the longing for liquor at the stated return of those periods—as after dinner, or immediately before going to bed, or whatever the period may be. He even feels it in certain companies, or in a particular tavern at which he is in the habit of taking his libations. We have all heard the story of the man who could never pass an inn on the road-side without entering it and taking a glass, and who, when, after a violent effort, he succeeded in getting beyond the spot, straightway returned to reward himself with a bumper for his resolution. It is a good rule for drunkards to break all such habits. Let the frequenter of drinking clubs, masonic lodges, and other Bacchanalian assemblages, leave off attending these places, and if he must drink, let him do so at home, where, there is every likelihood, his potations

will be less liberal. Let him also forswear the society of boon companions, either in his own habitation or in theirs. Let him, if he can manage it, remove from the place of his usual residence, and go somewhere else. Let him also take abundance of exercise, court the society of intellectual and sober persons, and turn his attention to reading, or gardening, or sailing, or whatever other amusement he has a fancy for. By following this advice rigidly, he will get rid of that baleful habit which haunts him like his shadow, and intrudes itself by day and by night into the sanctuary of his thoughts. And if he refuses to lay aside the Circean cup, let him reflect that Disease waits upon his steps—that Dropsy, Palsy, Emaciation, Poverty, and Idiotism, followed by the pale phantom, Death, pursue him like attendant spirits and claim him as their prey.

Sometimes an attack of disease has the effect of sobering drunkards for the rest of their lives. I knew a gentleman who had apoplexy in consequence of dissipation. He fortunately recovered, but the danger which he had escaped made such an impression upon his mind, that he never, till his dying day, tasted any liquor stronger than simple water. Many persons, after such changes, become remarkably lean; but this is not an unhealthy emaciation. Their mental powers

also suffer a very material improvement—the intellect becoming more powerful, and the moral feelings more soft and refined.

Those who have been for many years in the habit of indulging largely in drink, and to whom it has become an *elixir vitæ* indispensable to their happiness, cannot be suddenly deprived of it. This should be done by slow degrees, and must be the result of conviction. If the quantity be forcibly diminished against the person's will, no good can be done; he will only seize the first opportunity to remunerate himself for what he has been deprived of, and proceed to greater excesses than before. If his mind can be brought, by calm reflection, to submit to the decrease, much may be accomplished in the way of reformation. Many difficulties undoubtedly attend this gradual process, and no ordinary strength of mind is required for its completion. It is, however, less dangerous than the method recommended by Dr. Trotter, and ultimately much more effectual. Even although his plan were free of hazard, its effects are not likely to be lasting. The unnatural action, to which long intemperance had given rise, clings to the system with pertinacious adherence. The remembrance of liquor, like a delightful vision, still attaches itself to the drunkard's mind; and he longs, with insufferable ardour, to feel once

more the ecstacies to which it gave birth. This is the consequence of a too rapid separation. Had the sympathies of nature been gradually operated upon, there would have been less violence, and the longings had a better chance of wearing insensibly away.

Among the great authorities for acting in this manner, may be mentioned the celebrated Dr. Pitcairn. In attempting to break the habit in a Highland chieftain, one of his patients, he exacted a promise that the latter would every day drop a certain quantity of sealing-wax into his glass. He did so, and as the wax accumulated, the capacity of the glass diminished, and, consequently, the quantity of whisky it was capable of containing. By this plan he was cured of his bad habit altogether. In mentioning such a whimsical proceeding, I do not mean particularly to recommend it for adoption; although I am satisfied that the principle on which its eccentric contriver proceeded, was substantially correct.

I cannot give any directions with regard to the regimen of a reformed drunkard. This will depend upon different circumstances, such as age, constitution, diseases, and manner of living. It may be laid down as a general rule, that it ought to be as little heating as possible. A milk or vegetable diet will commonly be preferable to every other. But there are cases in which food of a richer quality is requisite, as when

there is much emaciation and debility. Here it may even be necessary to give a moderate quantity of wine. In gout, likewise, too great a change of living is not always salutary, more especially in advanced years, where there is weakness of the digestive organs, brought on by the disease. In old age, wine is often useful to sustain the system, more especially when sinking by the process of natural decay. The older a person is, the greater the inconvenience of abstaining all at once from liquors, and the more slowly ought they to be taken away. I cannot bring myself to believe that a man who, for half a century, has drunk freely, can suddenly discontinue this ancient habit without a certain degree of risk: the idea is opposed to all that we know of the bodily and mental functions.

In attempting to cure the habit of drunkenness, opium may sometimes be used with advantage. By giving it in moderate quantities, the liquors which the person is in the habit of taking may be diminished to a considerable extent, and he may thus be enabled to leave them off altogether. There is only one risk, and it is this—that he may become as confirmed a votary of opium as he was before of spirits or wine. Of two evils however, we should always choose the least; and it is certain that, however

perniciously opium may act upon the system, its moral effects, and its power of injuring reputation, are decidedly less formidable than those of the ordinary intoxicating agents.

It very often happens, after a long course of dissipation, that the stomach loses its tone, and rejects almost every thing that is swallowed. The remedy, in this case, is opium, which should be given in the solid form in preference to any other. Small quantities of negus are also beneficial; and the carbonate of ammonia, combined with some aromatic, is frequently attended with the best effects. Where there is much prostration of strength, wine should always be given. In such a case, the entire removal of the long accustomed stimulus would be attended with the worst effects. This must be done gradually.

Enervated drunkards will reap much benefit by removing to the country, if their usual residence is in town. The free air and exercise renovate their enfeebled frames; new scenes are presented to occupy their attention; and, the mind being withdrawn from former scenes, the chain of past associations is broken in two.

Warm and cold bathing will occasionally be useful, according to circumstances. Bitters are not to be recommended, especially if employed under the medium

of spirits. When there is much debility, chalybeates will prove serviceable. A visit to places where there are mineral springs is of use, not only from the waters, but from the agreeable society to be met with at such quarters. The great art of breaking the habit consists in managing the drunkard with kindness and address. This management must, of course, be modified by the events which present themselves, and which will vary in different cases.

Persons residing in tropical climates ought, more than others, to avoid intoxicating liquors. It is too much the practice in the West Indies to allay thirst by copious draughts of rum punch. In the East Indies, both the natives and strangers, with greater propriety, principally use sherbet. In countries where the solar influence is felt with such force, we cannot be too temperate. The food should be chiefly vegetable, and the drink as unirritating as possible. It may be laid down as an axiom, that, in these regions, wine and ardent spirits are invariably hurtful; not only in immediately heating the body, but in exposing it to the influence of other diseases.* A great portion of the

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* "In warm countries, the aqueous part of the blood loses itself greatly by perspiration; it must therefore be supplied by

deaths which occur among Europeans in the tropics, are brought on by excess. Instead of suiting their regimen to the climate, they persist in the habits of their own country, without reflecting that what is comparatively harmless in one region, is most destructive in another. There cannot be a stronger proof of this than the French troops in the West Indies having always, except in the St. Domingo expedition, suffered less, in proportion to their numbers, than the British, who are unquestionably more addicted to intemperance.

A word to punch drinkers. If those gentlemen who make an invariable habit of swilling punch after dinner, are averse to leave the world ten or fifteen years before their time, they would do well to diminish their potations. Punch is about the best way of taking ardent spirits, and a moderate quantity will do no great harm, but its daily and copious use, as commonly practised, they may rest assured, is most pernicious. This practice has long been exceedingly common, and those who

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a like liquid. Water is there of admirable use; strong liquors would coagulate the globules of blood that remain after the transuding of the aqueous humour."—*Montesquieu, Book* xiv. *Chap.* x.

persist in it are taking a short cut to the grave, as their swelled livers, schirrus stomachs, and apoplectic-looking physiognomies amply testify. I believe there does not exist a confirmed punch drinker, of fifteen years' standing, whose viscera are not more or less diseased.

It is a common practice in the west of Scotland to send persons who are excessively addicted to drunkenness, to rusticate and learn sobriety on the islands of Loch Lomond. There are, I believe, two islands appropriated for the purpose, where the convicts meet with due attention, and whatever indulgences their friends choose to extend towards them. Whether such a proceeding is consistent with law, or well adapted to answer the end in view, may be reasonably doubted, but of its severity as a punishment, there can be no question. It is, indeed, impossible to inflict any penalty upon drunkards so great as that of absolutely preventing them from indulging in liquor.

CHAPTER XIV.

ADVICE TO DETERMINED DRUNKARDS.

If a man is resolved to continue a drunkard, it may here be proper to mention in what manner he can do so with least risk to himself. One of the principal rules to be observed, not only by him, but by habitually sober people, is never to take any inebriating liquor, especially spirits, upon an empty stomach. There is no habit more common or more destructive than this: it not only intoxicates readier than when food has been previously taken, but it has a much greater tendency to impair the functions of the digestive organs. In addition, drunkards should shun raw spirits, which more rapidly bring on disease of the stomach, than when used in a diluted state. These

fluids are safe in proportion to the state of their dilution: the best form, therefore, in which they can be employed, is, I believe, cold punch. This, when well made, is always weaker than grog or toddy; and the acid with which it is impregnated, has not only a bracing effect upon the stomach, but operates as a diuretic—thereby counteracting, in a considerable degree, the activity of the spirit itself. The cases where the acid is prejudicial, are those of impaired action of the digestive organs, such as heartburn or dispepsia. It should also be dispensed with whenever there is a tendency in the constitution to form gravel, and also in all cases of gout. The next best form is that of grog;* and warm toddy the third. The last, to be good, must be stronger than the two others, while the hot water with which it is made, increases the naturally stimulating qualities of the active ingredient.

The malt liquor drunkard should, as a general rule, prefer porter to strong ale. Herb ale and purl are

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* The origin of the term grog is curious. Before the time of Admiral Vernon, rum was given in its raw state to the seamen; but he ordered it to be diluted, previous to delivery, with a certain quantity of water. So incensed were the tars at this watering of their favourite liquor, that they nicknamed the Admiral *Old Grog*, in allusion to a grogram coat which he chanced to wear: hence the name.

very pernicious, but the lighter varieties, such as small beer and home-brewed, are not only harmless, but even useful.

As to the wine-bibber, no directions can be given which will prove very satisfactory. The varieties of wines are so numerous, that any complete estimate of their respective powers is here impossible. It may, however, be laid down as a general rule, that those which are most diuretic, and excite least headach and fever, are the safest for the constitution. The light dry wines, such as Hock, Claret, Burgundy, Rhenish and Hermitage, are, generally speaking, more salubrious than the stronger varieties, such as Port, Sherry, or Madeira. Claret, in particular, is the most wholesome wine that is known. Tokay, Frontignac, Malmsey, Vino Tinto, Montefiascone, Canary, and other sweet wines, are apt, in consequence of their imperfect fermentation, to produce acid upon weak stomachs; but in other cases they are delightful drinks; and when there is no tendency to acidity in the system, they may be taken with comparative safety to a considerable extent. Whenever there is disease, attention must be paid to the wines best adapted to its particular nature. For instance, in gout the acescent wines, such as Hock and Claret, must be avoided, and Sherry or Madeira substituted in their

room; and should even these run into the acetous fermentation, they must be laid aside, and replaced by weak brandy and water. Champaign, except in cases of weak digestion, is one of the safest wines that can be drunk. Its intoxicating effects are rapid, but exceedingly transient, and depend partly upon the carbonic acid which is evolved from it, and partly upon the alcohol, which is suspended in this gas, being applied rapidly and extensively to a large surface of the stomach.

Drunkards will do well to follow the maxim of the facetious Morgan O'Doherty, and never mix their wines. Whatever wine they commence with, to that let them adhere throughout the evening. If there be any case where this rule may be transgressed with safety, it is perhaps in favour of Claret, a moderate quantity of which is both pleasant and refreshing after a course of Port or Madeira. Nor is the advice of the same eccentric authority, with regard to malt liquors, less just, or less worthy of observance—the toper being recommended to abstain scrupulously from such fluids when he means before-hand to "make an evening of it," and sit long at the bottle. The mixture, unquestionably, not only disorders the stomach, but effectually weakens the ability of the person to withstand the forthcoming debauch.

CHAPTER XV.

DRUNKENNESS IN NURSES.

Women, especially in a low station, who act as nurses, are strongly addicted to the practice of drinking porter and ales, for the purpose of augmenting their milk. No language can be sufficiently strong to deprecate this habit. It is most pernicious, and lays the foundation of a multitude of diseases to the infant. The milk, which ought to be bland and unirritating, acquires certain heating qualities, and becomes deteriorated to a degree of which those unaccustomed to investigate such matters have little conception. The child nursed by a drunkard is hardly ever healthy. It is, in a particular manner, subject to derangements of the digestive organs, and convulsive affections. With regard to the

latter, Dr. North * remarks, that he has seen them almost instantly removed by the child being transferred to a temperate woman. I have observed the same thing not only in convulsive cases, but in many others. No woman is qualified to be a nurse, unless strictly sober; and though stout children are sometimes reared by persons who indulge to a considerable extent in liquor, there can be no doubt that they are thereby exposed to risk, and that they would have had a much better chance of doing well, if the same quantity of milk had been furnished by natural means. If a woman cannot afford the necessary supply, without these indulgences, she should give over the infant to some one who can, and drop nursing altogether. The only cases in which a moderate portion of malt liquor is justifiable, are when the milk is deficient, and the nurse averse or unable to put another in her place. Here, of two evils we choose the least, and rather give the infant milk of an inferior quality, than endanger its health by weaning it prematurely, or stinting it of its accustomed nourishment.

Connected with this subject is the practice of administering stimulating liquors to children. This habit is

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* Practical Observations on the Convulsions of Infants.

so common in some parts of Scotland, that infants of a few days old are often forced to swallow raw whisky. Parents should be careful of allowing their offspring stimulating liquor of any kind. The earlier persons are initiated in its use, the more completely does it gain dominion over them, and the more difficult is the passion for it to be eradicated. Children naturally dislike liquors, a pretty convincing proof that in early life they are totally uncalled for, and that they only become agreeable by habit. It is, in general, long before the palate is reconciled to malt liquors; and most young persons prefer the sweet home-made wines of their own country, to the richer varieties imported from abroad. This shows that the love of such stimulants is in a great measure acquired, and also points out the necessity of guarding youth as much as possible from the acquisition of so unnatural a taste.

CHAPTER XVI.

LIQUORS NOT ALWAYS HURTFUL.

THOUGH drunkenness is always injurious, it does not follow that a moderate use of those agents which produce it is so. So far is this from being the case, that inebriating liquors are sometimes positively beneficial. It is impossible to deny that, in particular situations, as in those of hard-wrought seamen and soldiers, a moderate allowance is proper. The body, in such cases, would often sink under the accumulation of fatigue, if not recruited by some artificial stimulus. When Captain Bligh and his unfortunate companions were exposed to those dreadful privations consequent to their being set adrift, in an open boat, by the mutineers of the Bounty, the few drops of rum which were occa-

sionally doled out to each individual, proved of such extraordinary service, that, without this providential aid, every one must have perished of absolute exhaustion. This, and innumerable cases besides, prove that if liquors are often perverted to the worst purposes, and capable of producing the greatest calamities, they are also, in particular circumstances, of unquestionable benefit. It is unnecessary to mention many diseases of debility wherein wine is of more use than any medicine the physician can administer. Malt liquors also, when used in moderation, are often beneficial. Though the drunkenness produced by their excessive use is of the most stupifying and disgusting kind, yet, under temperate management, they are more wholesome than either spirits or wine. They abound in nourishment, and are well adapted to the labouring man, whose food is usually not of a very nutritive character. Every pugilist knows that under the use of ale or porter he acquires strength much more effectually than under either wine or spirits. The only regret is, that malt liquors are so often adulterated by narcotics. This renders them improper for persons of a plethoric habit of body, and also prevents them from being employed in many cases, in which they might otherwise be useful. It is to be regretted that the system of making home-brewed ale, so common

among the English, has made little progress in Scotland. This excellent beverage is free from those dangerous combinations employed by the brewers; and to the labouring classes in particular, it is a most nourishing and salubrious drink.*

In higher circles, where there is good living and little work, liquors of any kind are far less necessary; and till a man begins to get into the decline of life, they are absolutely useless. When that happens, he will be the better of a moderate allowance to recruit the vigour which approaching age steals from the frame. For young and middle-aged men, in good circumstances, water is the best drink. The food they eat is sufficiently nutritious and stimulating without any assistance from liquor. This they may depend upon; and, notwithstanding the ideas they may entertain of the effeminacy of the water drinker, there can be no doubt that, both in body and mind, he is much more enviably situated than themselves. His blood flows as cool and as pure as the element he quaffs; his brain is clear and composed; he is not

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* "In no respect is the alteration in diet more injurious, than in substituting ardent spirits for ale, the ancient beverage of the common people."—*Sir John Sinclair.*

encumbered with any useless corpulency; his body is free of all bad humours; his stomach of all bad digestions; and his appetite is healthy and natural. Having stated thus much, I am not ascetic enough to maintain that any man in health will be the worse of a moderate allowance. It is only such an excess as injures the constitution that is to be blamed. Abstractly considered, liquors in themselves are not pernicious: it is their abuse alone that makes them so, in the same manner as the most wholesome food becomes hurtful when taken to a gluttonous excess.

CHAPTER XVII.

CONCLUDING OBSERVATIONS.

In the foregoing chapters I have said as much upon ebriety as I thought would prove interesting to the reader. If a person is disposed to go very deeply into the subject, he may, indeed, still discover some points which have been omitted, and others which have been disposed of more superficially, perhaps, than they deserve. These, however, I trust, are not numerous, nor do I believe that the want of them will be very seriously felt. Among the few intoxicating agents left undescribed, I may mention bangue, camphor, leopard's-bane, (*arnica montana,*) wolfsbane, (*aconitum napellus,*) hop, (*humulus,*) carbonic acid, and the numerous family of ethers. Bangue is the leaf of a species of wild

hemp growing on the shores of Turkey, and of the Grecian Archipelago. It possesses many of the properties of opium, and is used by the poorer classes of Mussulmen as a substitute for this drug. Before being used, it is dried, and the exsiccated leaves are either chewed entire, or reduced into a fine powder, and made into pills. Its effects are to elevate and calm the spirits, and give increased energy to the corporeal faculties—followed by languor and depression both of body and mind. Leopard's-bane, wolfsbane, hop, thorn-apple, (*datura stramonium,*) hemlock, fox-glove, nightshade,* henbane, and indeed most narcotic poisons, possess the properties of opium and bangue in a greater or lesser

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* The following descriptions of the effects of nightshade, represent pretty accurately those of most narcotics :—

1. " Some children ate, in a garden, the fruit of the belladonna, (*deadly nightshade.*) Shortly after, they had burning fever, with convulsions, and very strong palpitations of the heart: they lost their senses, and became completely delirious: one of them, four years of age, died the next day: the stomach contained some berries of the belladonna crushed, and some seeds; it exhibited three ulcers; the heart was livid, and the pericardium without serosity."—*Journal General de Medicine, liv.* xxiv. *p.* 224.

2. " One child ate four ripe berries of the belladonna, another ate six. Both one and the other were guilty of extravagancies

degree. The effects of the whole of them upon the body are, in a great measure, the same, and the treatment of drunkenness or poisoning from them is in no respect different.

The intoxicating properties of camphor are considerable. It elevates the spirits, increases voluntary motion, and gives rise to vertigo; and these effects, as in the case of all narcotics, are succeeded by drowsiness, lassitude, and general depression. In large doses, syncope, convulsions, delirium, and even death, take place. It is sometimes used as a substitute for opium in cases of delirium, where, from particular circumstances, the latter either cannot be taken, or does not produce its usual effects. The common belief, however, of camphor being an antidote to this medicine, is quite unfounded. It neither decomposes opium, nor prevents

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which astonished the mother; their pupils were dilated; their countenances no longer remained the same; they had a cheerful delirium, accompanied with fever. The physician being called in, found them in a state of great agitation, talking at random, running, jumping, laughing sardonically; their countenances purple, and pulses hurried. He administered to each of them half a grain of emetic tartar and a drachm of glauber salt, in four or five ounces of water: they had copious evacuations during seven or eight hours, and the symptoms disappeared."—*Gazette de Santé*, 11 *Thermidor*, *an.* xv. *p.* 508.

it from acting poisonously upon the system; but, in consequence of its stimulating properties, it may be advantageously given in small doses to remove the stupor and coma produced by opium.

Carbonic acid partially inebriates, as is seen in drinking ginger beer, cider, Champaign, or even soda water, in which no alcoholic principle exists. Ethers, when taken in quantity, also give rise to a species of intoxication, which resembles that from ardent spirits in all respects, except in being more fugacious.

APPENDIX.

APPENDIX.

No. I.

Excerpt from Paris's Pharmacologia.

"The characteristic ingredient of all wines is *alcohol*, and the quantity of this, and the condition or state of combination in which it exists, are the circumstances that include all the interesting and disputed points of medical inquiry. Daily experience convinces us that the same quantity of alcohol, applied to the stomach under the form of natural wine, and in a state of mixture with water, will produce very different effects upon the body, and to an extent which it is difficult to comprehend: it has, for instance, been demonstrated that Port, Madeira, and Sherry contain from one-fourth to one-fifth of their bulk of alcohol, so that a person who takes a bottle of either of them, will thus take nearly half a pint of alcohol, or almost a pint of pure brandy! and moreover, that different wines, although of the same specific gravity, and consequently containing the same absolute proportion of spirit, will be found to vary very considerably in their intoxicating powers; no wonder, then, that such results

should stagger the philosopher, who is naturally unwilling to accept any tests of difference from the nervous system, which elude the ordinary resources of analytical chemistry; the conclusion was therefore drawn, that alcohol must necessarily exist in wine, in a far different condition from that in which we know it in a separate state, or, in other words, that its elements only could exist in the vinous liquor, and that their union was determined, and, consequently, alcohol produced by the action of distillation. That it was the *product* and not the *educt* of distillation, was an opinion which originated with Rouelle, who asserted that alcohol was not completely formed until the temperature was raised to the point of distillation: more lately, the same doctrine was revived and promulgated by Fabbroni, in the memoirs of the Florentine academy. Gay-Lussac has, however, silenced the clamorous partisans of this theory, by separating the alcohol by distillation at the temperature of 66° Fah., and by the aid of a vacuum, it has since been effected at 56°: besides, it has been shown that by precipitating the colouring matter, and some of the other elements of the wine, by *sub-acetate* of *lead*, and then saturating the clear liquor with *sub-carbonate* of *potass*, the alcohol may be completely separated without any elevation of temperature; and by this ingenious expedient, Mr. Brande has been enabled to construct a table, exhibiting the proportions of combined alcohol which exist in the several kinds of wine: no doubt, therefore, can remain upon this subject, and the fact of the difference of effect, produced by the same bulk of alcohol, when presented to the stomach in different states of combination, adds another striking and instructive illustration to those already enumerated in the course of this work, of the extraordinary powers of chemical combination in modifying the activity of substances upon the living system. In the present instance, the alcohol is so combined

with the extractive matter of the wine, that it is probably incapable of exerting its full specific effects upon the stomach, before it becomes altered in its properties, or, in other words, *digested*; and this view of the subject may be fairly urged in explanation of the reason why the intoxicating effects of the same wine are so liable to vary, in degree, in the same individual, from the peculiar state of his digestive organs at the time of his potation. Hitherto we have only spoken of pure wine, but it is essential to state, that the stronger wines of Spain, Portugal and Sicily, are rendered remarkable in this country by the addition of brandy, and must consequently contain *uncombined* alcohol, the proportion of which, however, will not necessarily bear a ratio to the quantity added, because, at the period of its admixture, a renewed fermentation is produced by the scientific vintner, which will assimilate and combine a certain portion of the foreign spirit with the wine: this manipulation, in technical language, is called *fretting-in*. The free alcohol may, according to the experiments of Fabbroni, be immediately separated by saturating the vinous fluid with *sub-carbonate* of *potass*, while the combined portion will remain undisturbed: in ascertaining the fabrication and salubrity of a wine, this circumstance ought always to constitute a leading feature in the inquiry; and the tables of Mr. Brande would have been greatly enhanced in practical value, had the relative proportions of *uncombined* spirit been appreciated in his experiments, since it is to this, and not to the *combined* alcohol, that the injurious effects of wine are to be attributed. 'It is well known,' observes Dr. Macculloch, 'that diseases of the liver are the most common, and the most formidable of those produced by the use of *ardent* spirits; it is equally certain that no such disorders follow the intemperate use of *pure* wine, however long indulged in: to the concealed and unwitting consumption of spirit, there-

fore, as contained in the wines commonly drunk in this country, is to be attributed the excessive prevalence of those hepatic affections, which are comparatively little known to our continental neighbours.' Thus much is certain, that their ordinary wines contain no alcohol but what is disarmed of its virulence by the prophylactic energies of combination."

No. II.

Mr. Brande's Table of the Alcoholic Strength of Liquors.

	Proportion of Spirit per Cent. by Measure.
1. Lissa,	26.47
Ditto,	24.35
Average,	25.41
2. Raisin wine,	26.40
Ditto,	25.77
Ditto,	23.20
Average,	25.12
3. Marsala,	26.03
Ditto,	25.05
Average,	25.09
4. Madeira,	24.42
Ditto,	23.93
Ditto, (Sircial,)	21.40
Ditto,	19.41
Average,	22.27
5. Currant wine,	20.55

6.	Sherry,	19.81
	Ditto,	19.83
	Ditto,	18.79
	Ditto,	18.25
	Average,	19.17
7.	Teneriffe,	19.79
8.	Colares,	19.75
9.	Lachryma Christi,	19.70
10.	Constantia, (white,)	19.75
11.	Ditto, (red,)	18.92
12.	Lisbon,	18.94
13.	Malaga, (1666,)	18.94
14.	Bucellas,	18.49
15.	Red Madeira,	22.30
	Ditto,	18.40
	Average,	20.35
16.	Cape Muschat,	18.25
17.	Cape Madeira,	22.94
	Ditto,	20.50
	Ditto,	18.11
	Average,	20.51
18.	Grape wine,	18.11
19.	Calcavella,	19.20
	Ditto,	18.10
	Average,	18.65
20.	Vidonia,	19.25
21.	Alba Flora,	17.26
22.	Malaga,	17.26
23.	White Hermitage,	17.43
24.	Rousillon,	19.00
	Ditto,	17.26
	Average,	18.13

25. Claret, ... 17.11
Ditto, ... 16.32
Ditto, ... 14.08
Ditto, ... 12.91
Average, ... 15.10
26. Malmsey Madeira, ... 16.40
27. Lunel, ... 15.52
28. Shiraz, ... 15.52
29. Syracuse, ... 15.28
30. Sauterne, ... 14.22
31. Burgundy, ... 16.60
Ditto, ... 15.22
Ditto, ... 14.53
Ditto, ... 11.95
Average, ... 14.57
32. Hock, ... 14.37
Ditto, ... 13.00
Ditto, (old in cask,) 8.88
Average, ... 12.08
33. Nice, ... 14.63
34. Barsac, ... 13.86
35. Tent, ... 13.30
36. Champaign, (still,) 13.80
Ditto, (sparkling,) 12.80
Ditto, (red,) 12.56
Ditto, (ditto,) 11.30
Average, ... 12.61
37. Red Hermitage, ... 12.32
38. Vin de Grave, ... 13.94
Ditto, ... 12.80
Average, ... 13.37
39. Frontignac, ... 12.79

40. Cote Rotie, ... 12.32
41. Gooseberry wine, ... 11.84
42. Orange wine,—average of six samples made by a London manufacturer, ... 11.26
43. Tokay, ... 9.88
44. Elder wine, ... 9.87
45. Cider, highest average, ... 9.87
Ditto, lowest average, ... 5.21
46. Perry, average of four samples, ... 7.26
47. Mead, ... 7.32
48. Ale, (Burton,) 8.88
Ditto, (Edinburgh,) 6.20
Ditto, (Dorchester,) 5.56
Average, ... 6.87
49. Brown Stout, ... 6.80
50. London Porter, average, ... 4.20
51. London Small Beer, average, ... 1.28
52. Brandy, ... 53.39
53. Rum, ... 53.68
54. Gin, ... 51.60
55. Scotch Whisky, ... 54.32
56. Irish ditto, ... 53.90

No. III.

In the first chapter, it is stated that drunkenness prevails to a much greater degree in northern than in southern latitudes. While making this observation, I had only in view the countries north of the equator; and, so far as they are concerned, it is

perfectly correct. I should, however, have mentioned, that, as we proceed south of the line, the vice will be found to increase, the nearer we approach the antartic circle. To use the words of Montesquieu, "Go from the equator to our pole, and you will find drunkenness increasing together with the degree of latitude. Go from the same equator to the opposite pole, and you will find drunkenness travelling south, as on this side it travels towards the north."

No. IV.

Adulteration of Wine.

"On the 17th of January, the passengers by the Highflyer coach from the north, dined, as usual, at Newark. A bottle of Port wine was ordered; on tasting which, one of the passengers observed that it had an unpleasant flavour, and begged that it might be changed. The waiter took away the bottle, poured into a fresh decanter half the wine which had been objected to, and filled it up from another bottle. This he took into the room, and the greater part was drunk by the passengers, who, after the coach had set out towards Grantham, were seized with extreme sickness; one gentleman in particular, who had taken more of the wine than the others, it was thought would have died, but has since recovered. The half of the bottle of wine sent out of the passengers' room, was put aside for the purpose of mixing negus. In the evening, Mr. Bland, of Newark, went into the hotel, and drank a glass or two of wine and water. He returned home at his usual hour, and went to bed; in the middle of the night, he was taken so ill as to induce Mrs. Bland

to send for his brother, an apothecary in the town; but before that gentleman arrived, he was dead. An inquest was held, and the jury, after the fullest inquiry, and the examination of the surgeons by whom the body was opened, returned a verdict of—*Died by Poison.*"—*Monthly Magazine for March*, 1811.

"The most dangerous adulteration of wine, is by some preparations of lead, which possess the property of stopping the progress of acescence of wine, and also of rendering white wines, when muddy, transparent. I have good reason to state, that lead is certainly employed for this purpose. The effect is very rapid; and there appears to be no other method known, of rapidly recovering ropy wines. Wine merchants persuade themselves that the minute quantity of lead employed for that purpose is perfectly harmless, and that no atom of lead remains in the wine. Chemical analysis proves the contrary; and the practice of clarifying spoiled white wines, by means of lead, must be pronounced highly deleterious."—*Accum.*

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ERRATUM.

Page 125, line 3, *for* Knawing, *read* Gnawing.

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